

# SEQUENCE LISTING

<110> Aziz, Natasha  
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Wilson, Keith  
Zlotnik, Albert

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<210> 48

<211> 3195

<212> DNA

<213> Homo Sapiens

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<211> 2335

<212> PRT

<213> Homo Sapiens

<400> 59

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		20						25					30		

Asp Leu Thr Pro Asp Asn Trp Lys Asn Ile Thr Val Pro His Ser Gly  
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Arg His Ser Glu Val Ser Arg Gly Glu Leu Val Cys Arg Thr Cys Ser  
 50 55 60

Glu Cys Ser Ala Gly Pro His Ile Trp Met Lys Gly Leu Tyr Gln Thr  
 65 70 75 80

Gln Asp Glu Glu Ala Gly Gly Glu Asn Ile Phe Ile Leu Leu Phe Ile  
 85 90 95

Glu Ser Thr Gln Phe Gly Gln Phe Val Ala Met Gly Ser Pro Ile Thr  
 100 105 110

Glu His Lys Val Phe Thr Met Tyr Leu Gly Leu Ala Thr His Leu Phe  
 115 120 125

Tyr Ser Leu Ile Thr His Pro Phe Val Leu Leu Glu Asn His Ser Cys  
 130 135 140

Pro Ser Ser Val His Gly Phe Asp Val Ala Gly Leu Ile Phe Asp Lys  
 145 150 155 160

Val Gly Met Arg Ser Arg Pro Gly Arg Met Gly Ala Leu Phe Ala Tyr  
 165 170 175

Phe Ala Gly Phe Ile Arg Arg Lys Ala Leu Val Val Cys Leu Phe Val  
 180 185 190

Phe Cys Trp Ser Asn Glu Ala Ala Asn Lys Pro Pro Ile Gln Glu Ala  
 195 200 205

Ala Gln Leu Ser Arg Pro Ala Gln Gly Ala Arg Arg Ala Ser Glu Arg  
 210 215 220

Lys Phe Leu Ala Phe Ser Cys Pro Leu Ala Gly His Tyr Ala Ala Lys  
 225 230 235 240

Gln Pro Ser Pro Ser Pro Pro Pro Pro Ala Pro Pro Ala Pro Pro  
 245 250 255

Ala Ala Arg Ala Ala Gln Leu Ser Ala Gly Gly Gly Val Ala Gln Pro  
 260 265 270

Ser Ala Asp Gly Thr Leu Ala Ala Arg Pro Gln Arg Leu Leu Lys Ser  
 275 280 285

Lys Val Gly Gly Gly Arg Arg Ala Pro Arg Ala Leu His Gly Arg Cys  
 290 295 300

Leu Ala Ser Pro Pro Gln Pro Arg Arg Ala Gly Gly Arg Gly Val Gly  
 305 310 315 320

Ala Ala Glu Gly Gly Val Gly Ser Thr Met Gln Phe Val Ser Trp Ala  
 325 330 335

Thr Leu Leu Thr Leu Leu Val Arg Asp Leu Ala Glu Met Gly Ser Pro  
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Asp Ala Ala Ala Ala Val Arg Lys Asp Arg Leu His Pro Arg Gln Val  
 355 360 365

Lys Leu Leu Glu Thr Leu Ser Glu Tyr Glu Ile Val Ser Pro Ile Arg  
 370 375 380

Val Asn Ala Leu Gly Glu Pro Phe Pro Thr Asn Val His Phe Lys Arg  
 385 390 395 400

Thr Arg Arg Ser Ile Asn Ser Ala Thr Asp Pro Trp Pro Ala Phe Ala  
 405 410 415

Ser Ser Ser Ser Ser Thr Ser Ser Gln Ala His Tyr Arg Leu Ser  
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Ala Phe Gly Gln Gln Phe Leu Phe Asn Leu Thr Ala Asn Ala Gly Phe  
 435 440 445

Ile Ala Pro Leu Phe Thr Val Thr Leu Leu Gly Thr Pro Gly Val Asn  
 450 455 460

Gln Thr Lys Phe Tyr Ser Glu Glu Glu Ala Glu Leu Lys His Cys Phe  
 465 470 475 480

Tyr Lys Gly Tyr Val Asn Thr Asn Ser Glu His Thr Ala Val Ile Ser  
 485 490 495

Leu Cys Ser Gly Met Gly Leu Leu Asp Val Ser Glu Leu Ser Gly Val  
 500 505 510

Trp Thr Arg Phe Ser Gly Ala Leu Pro Asn Ala Ala Arg Arg Pro Gly

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Ser Gln Phe Pro Asn Ser Glu Lys Val Thr Gly Val Ala Val Pro Cys				
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Ser Lys Leu Gly His Pro Gly Ala Glu Pro Leu Ser Ala Gly Arg Thr				
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Arg Leu Leu Ile Val Asp Leu Thr Arg His Leu Pro Pro Thr Ser Pro				
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Arg His Leu Arg Ser Arg Cys Gly Thr Val Leu Ala Arg Ala Arg Val				
		580		585
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Val Leu Asp Phe Pro Lys Arg Arg Ala Phe Leu Pro Arg Ala Cys Asp				
		595		600
				605
Ala Glu Thr Phe Pro Ala Gly Pro Trp Ile Leu Thr Pro Arg His Trp				
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Ala Ala Pro Ser Val Arg Cys Arg Ser Trp Val Leu Lys Phe Pro Ser				
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Thr Ser Phe Leu Leu Cys Leu Ser Met Glu Gly Ser Gly Gly Glu Arg				
		645		650
				655
Gly Lys Pro Glu Asp Trp Glu Gly Val Val Leu Ala Cys Trp Asp Ser				
		660		665
				670
Arg Lys Gly Ile Asn Pro Phe Ser Pro Gln Gln Ser Ala Arg Ser Arg				
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				685
Gly Ser Arg Asn Ala Leu Ser Arg Leu Phe Gly Gly Gly Arg Arg Arg				
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Gln Leu Gly Glu Val Gly Gly Gly Ala Ala Leu Gly Thr Phe Arg Ser				
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				720
His Asp Gly Asp Tyr Phe Ile Glu Pro Leu Gln Ser Met Asp Glu Gln				
		725		730
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Glu Asp Glu Glu Glu Gln Asn Lys Pro His Ile Ile Tyr Arg Arg Ser				
		740		745
				750
Ala Pro Gln Arg Glu Pro Ser Thr Gly Arg His Ala Cys Asp Thr Ser				
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Gly Leu Gln Lys Cys Leu Ile Asn Gly Ser His Glu Asn Ile Tyr Val  
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Phe Val Glu Cys Phe Leu Glu Thr Ser Gly Leu Leu Met Phe Cys Asp  
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Leu Arg Asn Cys Ser Lys Val Pro Val Arg Tyr Ala Val Ser Tyr Phe  
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Cys Thr Pro Ser Leu Asn Ser Asp Ala Ala Ser Gln Asn Ser Leu Glu  
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Tyr Gly Thr Ile His Gln Gln Val Ser Glu Glu Trp Thr Asn Arg Ser  
 835 840 845

Arg Thr Pro Leu Glu Pro Glu His Lys Asn Arg His Ser Lys Asp Lys  
 850 855 860

Lys Lys Thr Arg Ala Arg Lys Trp Gly Glu Arg Ile Asn Leu Ala Gly  
 865 870 875 880

Asp Val Ala Ala Leu Asn Ser Gly Leu Ala Thr Glu Ala Phe Ser Ala  
 885 890 895

Tyr Gly Asn Lys Thr Asp Asn Thr Arg Glu Lys Arg Thr His Arg Arg  
 900 905 910

Thr Lys Arg Phe Leu Ser Tyr Pro Arg Phe Val Glu Val Leu Val Val  
 915 920 925

Ala Asp Asn Arg Met Val Ser Tyr His Gly Glu Asn Leu Gln His Tyr  
 930 935 940

Ile Leu Thr Leu Met Ser Ile Val Ala Ser Ile Tyr Lys Asp Pro Ser  
 945 950 955 960

Ile Gly Asn Leu Ile Asn Ile Val Ile Val Asn Leu Ile Val Ile His  
 965 970 975

Asn Glu Gln Asp Gly Pro Ser Ile Ser Phe Asn Ala Gln Thr Thr Leu  
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Lys Asn Phe Cys Gln Trp Gln His Ser Lys Asn Ser Pro Gly Gly Ile  
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His	His	Asp	Thr	Ala	Val	Leu	Leu	Thr	Arg	Gln	Asp	Ile	Cys	Arg
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Ala	His	Asp	Lys	Cys	Asp	Thr	Leu	Gly	Leu	Ala	Glu	Leu	Gly	Thr
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Ile	Cys	Asp	Pro	Tyr	Arg	Ser	Cys	Ser	Ile	Ser	Glu	Asp	Ser	Gly
1040						1045					1050			
Leu	Ser	Thr	Ala	Phe	Thr	Ile	Ala	His	Glu	Leu	Gly	His	Val	Phe
1055						1060					1065			
Asn	Met	Pro	His	Asp	Asp	Asn	Asn	Lys	Cys	Lys	Glu	Glu	Gly	Val
1070						1075					1080			
Lys	Ser	Pro	Gln	His	Val	Met	Ala	Pro	Thr	Leu	Asn	Phe	Tyr	Thr
1085						1090					1095			
Asn	Pro	Trp	Met	Trp	Ser	Lys	Cys	Ser	Arg	Lys	Tyr	Ile	Thr	Glu
1100						1105					1110			
Phe	Leu	Asp	Thr	Gly	Tyr	Gly	Glu	Cys	Leu	Leu	Asn	Glu	Pro	Glu
1115						1120					1125			
Ser	Arg	Pro	Tyr	Pro	Leu	Pro	Val	Gln	Leu	Pro	Gly	Ile	Leu	Tyr
1130						1135					1140			
Asn	Val	Asn	Lys	Gln	Cys	Glu	Leu	Ile	Phe	Gly	Pro	Gly	Ser	Gln
1145						1150					1155			
Val	Cys	Pro	Tyr	Met	His	Cys	Lys	Tyr	Gly	Phe	Cys	Val	Pro	Lys
1160						1165					1170			
Glu	Met	Asp	Val	Pro	Val	Thr	Asp	Gly	Ser	Trp	Gly	Ser	Trp	Ser
1175						1180					1185			
Pro	Phe	Gly	Thr	Cys	Ser	Arg	Thr	Cys	Gly	Gly	Gly	Ile	Lys	Thr
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Tyr	Cys	Val	Gly	Arg	Arg	Met	Lys	Phe	Lys	Ser	Cys	Asn	Thr	Glu
1220						1225					1230			



Pro Cys Leu Lys Gln Lys Arg Asp Phe Arg Asp Glu Gln Cys Ala  
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 His Phe Asp Gly Lys His Phe Asn Ile Asn Gly Leu Leu Pro Asn  
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 Val Arg Trp Val Pro Lys Tyr Ser Gly Ile Leu Met Lys Asp Arg  
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 1370 1375 1380  
  
 Asp Asp Asp Asn Tyr Leu Ala Leu Ser Ser Ser Lys Gly Glu Phe  
 1385 1390 1395  
  
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 Arg Ile Gly Asn Ala Val Val Glu Tyr Ser Gly Ser Glu Thr Ala  
 1415 1420 1425  
  
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 1430 1435 1440  
  
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 1445 1450 1455  
  
 Tyr Ser Phe Asn Ile Pro Ile Glu Asp Lys Pro Gln Gln Phe Tyr

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Gly Glu Arg Lys Arg Lys	Leu Val Cys Thr Arg	Glu Ser Asp Gln		
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Leu Thr Val Ser Asp Gln	Arg Cys Asp Arg Leu	Pro Gln Pro Gly		
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His Ile Thr Glu Pro Cys	Gly Thr Asp Cys Asp	Leu Arg Trp His		
1520	1525	1530		
Val Ala Ser Arg Ser Glu	Cys Ser Ala Gln Cys	Gly Leu Gly Tyr		
1535	1540	1545		
Arg Thr Leu Asp Ile Tyr	Cys Ala Lys Tyr Ser	Arg Leu Asp Gly		
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Lys Thr Glu Lys Val Asp	Asp Gly Phe Cys Ser	Ser His Pro Lys		
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1610	1615	1620		
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1625	1630	1635		
Gln Arg Cys Ser Glu Phe	Pro Cys Pro Gln Trp	Lys Ser Gly Asp		
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1790						1795					1800			
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1805						1810					1815			
Pro	Arg	Pro	Val	Ala	Lys	Glu	Glu	Cys	Ser	Val	Thr	Pro	Cys	Gly
1820						1825					1830			
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1850						1855					1860			
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1865						1870					1875			
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Pro	Arg	Ser	Ala	Ser	Pro	Ser	Arg	Thr	His	Val	Leu	Gly	Gly	Asn
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Pro Gly 1955	Ser Lys Ser Cys Asp 1960	Gln His Tyr Gly Ser 1965	Thr Cys Ala
Gly Gly 1970	Ser Gln Arg Arg Val 1975	Val Val Cys Gln Asp 1980	Glu Asn Gly
Tyr Thr 1985	Ala Asn Asp Cys Val 1990	Glu Arg Ile Lys Pro 1995	Asp Glu Gln
Arg Ala 2000	Cys Glu Ser Gly Pro 2005	Cys Pro Gln Trp Ala 2010	Tyr Gly Asn
Trp Gly 2015	Glu Cys Thr Lys Leu 2020	Cys Gly Gly Gly Ile 2025	Arg Thr Arg
Leu Val 2030	Val Cys Gln Arg Ser 2035	Asn Gly Glu Arg Phe 2040	Pro Asp Leu
Ser Cys 2045	Glu Ile Leu Asp Lys 2050	Pro Pro Asp Arg Glu 2055	Gln Cys Asn
Thr His 2060	Ala Cys Pro His Asp 2065	Ala Ala Trp Ser Thr 2070	Gly Pro Trp
Ser Ser 2075	Ser Met Trp Gln Val 2080	Asn Asn Lys Thr Val 2085	Thr Leu Gly
Asn Leu 2090	Cys Ser Val Ser Cys 2095	Gly Arg Gly His Lys 2100	Gln Arg Asn
Val Tyr 2105	Cys Met Ala Lys Asp 2110	Gly Ser His Leu Glu 2115	Ser Asp Tyr
Cys Lys 2120	His Leu Ala Lys Pro 2125	His Gly His Arg Lys 2130	Cys Arg Gly
Gly Arg 2135	Cys Pro Lys Trp Lys 2140	Ala Gly Ala Trp Ser 2145	Gln Lys Thr

Thr Asn Ser Asp Cys Thr Glu Ala Asp Cys Gly His Leu Ala Glu  
2150 2155 2160

Ile Glu Ser Gln Phe Ile Leu Glu Val Leu Glu Glu Arg Ala Val  
2165 2170 2175

Asp Glu Ser Ser Arg Lys Tyr Leu Cys Pro Phe Ala Cys Leu Gln  
2180 2185 2190

Lys Cys Ser Val Ser Cys Gly Arg Gly Val Gln Gln Arg His Val  
2195 2200 2205

Gly Cys Gln Ile Gly Thr His Lys Ile Ala Arg Glu Thr Glu Cys  
2210 2215 2220

Asn Pro Tyr Thr Arg Pro Glu Ser Glu Arg Asp Cys Gln Gly Pro  
2225 2230 2235

Arg Cys Pro Leu Tyr Thr Trp Arg Ala Glu Glu Trp Gln Glu Thr  
2240 2245 2250

Tyr His Gly Leu Leu Ser Pro Ser Pro Ser Leu Cys His Ala Lys  
2255 2260 2265

Leu Asn Pro Ala Pro Arg Ser Gly Lys Pro Gln Pro Arg Cys His  
2270 2275 2280

Phe Leu Ser Glu Ala Phe Ala Asn His Thr Thr Pro Leu Asn Leu  
2285 2290 2295

Ser Gln Met Leu Leu His Ser Ala Leu Thr Thr His Ala Asp Tyr  
2300 2305 2310

Cys Thr Leu Ala Val Asn Thr Trp Asn Ser His Cys Leu Phe Phe  
2315 2320 2325

Ser Ser Met Leu Ser Val Ile  
2330 2335

<210> 60  
<211> 1072  
<212> PRT  
<213> Homo Sapiens

<400> 60

Met Gln Phe Val Ser Trp Ala Thr Leu Leu Thr Leu Leu Val Arg Asp  
1 5 10 15

Leu Ala Glu Met Gly Ser Pro Asp Ala Ala Ala Ala Val Arg Lys Asp  
                   20                                  25                                  30

Arg Leu His Pro Arg Gln Val Lys Leu Leu Glu Thr Leu Gly Glu Tyr  
                   35                                  40                                  45

Glu Ile Val Ser Pro Ile Arg Val Asn Ala Leu Gly Glu Pro Phe Pro  
                   50                                  55                                  60

Thr Asn Val His Phe Lys Arg Thr Arg Arg Ser Ile Asn Ser Ala Thr  
                   65                                  70                                  75                                  80

Asp Pro Trp Pro Ala Phe Ala Ser Ser Ser Ser Ser Ser Thr Ser Ser  
                                   85                                  90                                  95

Gln Ala His Tyr Arg Leu Ser Ala Phe Gly Gln Gln Phe Leu Phe Asn  
                                   100                                  105                                  110

Leu Thr Ala Asn Ala Gly Phe Ile Ala Pro Leu Phe Thr Val Thr Leu  
                   115                                  120                                  125

Leu Gly Thr Pro Gly Val Asn Gln Thr Lys Phe Tyr Ser Glu Glu Glu  
                   130                                  135                                  140

Ala Glu Leu Lys His Cys Phe Tyr Lys Gly Tyr Val Asn Thr Asn Ser  
                   145                                  150                                  155                                  160

Glu His Thr Ala Val Ile Ser Leu Cys Ser Gly Met Leu Gly Thr Phe  
                                   165                                  170                                  175

Arg Ser His Asp Gly Asp Tyr Phe Ile Glu Pro Leu Gln Ser Met Asp  
                                   180                                  185                                  190

Glu Gln Glu Asp Glu Glu Glu Gln Asn Lys Pro His Ile Ile Tyr Arg  
                   195                                  200                                  205

Arg Ser Ala Pro Gln Arg Glu Pro Ser Thr Gly Arg His Ala Cys Asp  
                   210                                  215                                  220

Thr Ser Glu His Lys Asn Arg His Ser Lys Asp Lys Lys Lys Thr Arg  
                   225                                  230                                  235                                  240

Ala Arg Lys Trp Gly Glu Arg Ile Asn Leu Ala Gly Asp Val Ala Ala  
                                   245                                  250                                  255

Leu Asn Ser Gly Leu Ala Thr Glu Ala Phe Ser Ala Tyr Gly Asn Lys  
 260 265 270

Thr Asp Asn Thr Arg Glu Lys Arg Thr His Arg Arg Thr Lys Arg Phe  
 275 280 285

Leu Ser Tyr Pro Arg Phe Val Glu Val Leu Val Val Ala Asp Asn Arg  
 290 295 300

Met Val Ser Tyr His Gly Glu Asn Leu Gln His Tyr Ile Leu Thr Leu  
 305 310 315 320

Met Ser Ile Val Ala Ser Ile Tyr Lys Asp Pro Ser Ile Gly Asn Leu  
 325 330 335

Ile Asn Ile Val Ile Val Asn Leu Ile Val Ile His Asn Glu Gln Asp  
 340 345 350

Gly Pro Ser Ile Ser Phe Asn Ala Gln Thr Thr Leu Lys Asn Leu Cys  
 355 360 365

Gln Trp Gln His Ser Lys Asn Ser Pro Gly Gly Ile His His Asp Thr  
 370 375 380

Ala Val Leu Leu Thr Arg Gln Asp Ile Cys Arg Ala His Asp Lys Cys  
 385 390 395 400

Asp Thr Leu Gly Leu Ala Glu Leu Gly Thr Ile Cys Asp Pro Tyr Arg  
 405 410 415

Ser Cys Ser Ile Ser Glu Asp Ser Gly Leu Ser Thr Ala Phe Thr Ile  
 420 425 430

Ala His Glu Leu Gly His Val Phe Asn Met Pro His Asp Asp Asn Asn  
 435 440 445

Lys Cys Lys Glu Glu Gly Val Lys Ser Pro Gln His Val Met Ala Pro  
 450 455 460

Thr Leu Asn Phe Tyr Thr Asn Pro Trp Met Trp Ser Lys Cys Ser Arg  
 465 470 475 480

Lys Tyr Ile Thr Glu Phe Leu Asp Thr Gly Tyr Gly Glu Cys Leu Leu  
 485 490 495

Asn Glu Pro Glu Ser Arg Pro Tyr Pro Leu Pro Val Gln Leu Pro Gly  
 500 505 510  
 Ile Leu Tyr Asn Val Asn Lys Gln Cys Glu Leu Ile Phe Gly Pro Gly  
 515 520 525  
 Ser Gln Val Cys Pro Tyr Met Met Gln Cys Arg Arg Leu Trp Cys Asn  
 530 535 540  
 Asn Val Asn Gly Val His Lys Gly Cys Arg Thr Gln His Thr Pro Trp  
 545 550 555 560  
 Ala Asp Gly Thr Glu Cys Glu Pro Gly Lys His Cys Lys Tyr Gly Phe  
 565 570 575  
 Cys Val Pro Lys Glu Met Asp Val Pro Val Thr Asp Gly Ser Trp Gly  
 580 585 590  
 Ser Trp Ser Pro Phe Gly Thr Cys Ser Arg Thr Cys Gly Gly Gly Ile  
 595 600 605  
 Lys Thr Ala Ile Arg Glu Cys Asn Arg Pro Glu Pro Lys Asn Gly Gly  
 610 615 620  
 Lys Tyr Cys Val Gly Arg Arg Met Lys Phe Lys Ser Cys Asn Thr Glu  
 625 630 635 640  
 Pro Cys Leu Lys Gln Lys Arg Asp Phe Arg Asp Glu Gln Cys Ala His  
 645 650 655  
 Phe Asp Gly Lys His Phe Asn Ile Asn Gly Leu Leu Pro Asn Val Arg  
 660 665 670  
 Trp Val Pro Lys Tyr Ser Gly Ile Leu Met Lys Asp Arg Cys Lys Leu  
 675 680 685  
 Phe Cys Arg Val Ala Gly Asn Thr Ala Tyr Tyr Gln Leu Arg Asp Arg  
 690 695 700  
 Val Ile Asp Gly Thr Pro Cys Gly Gln Asp Thr Asn Asp Ile Cys Val  
 705 710 715 720  
 Gln Gly Leu Cys Arg Gln Ala Gly Cys Asp His Val Leu Asn Ser Lys  
 725 730 735  
 Ala Arg Arg Asp Lys Cys Gly Val Cys Gly Gly Asp Asn Ser Ser Cys



740					745					750					
Lys	Thr	Val	Ala	Gly	Thr	Phe	Asn	Thr	Val	His	Tyr	Gly	Tyr	Asn	Thr
		755					760					765			
Val	Val	Arg	Ile	Pro	Ala	Gly	Ala	Thr	Asn	Ile	Asp	Val	Arg	Gln	His
		770				775					780				
Ser	Phe	Ser	Gly	Glu	Thr	Asp	Asp	Asp	Asn	Tyr	Leu	Ala	Leu	Ser	Ser
						790					795				800
Ser	Lys	Gly	Glu	Phe	Leu	Leu	Asn	Gly	Asn	Phe	Val	Val	Thr	Met	Ala
				805					810					815	
Lys	Arg	Glu	Ile	Arg	Ile	Gly	Asn	Ala	Val	Val	Glu	Tyr	Ser	Gly	Ser
			820					825					830		
Glu	Thr	Ala	Val	Glu	Arg	Ile	Asn	Ser	Thr	Asp	Arg	Ile	Glu	Gln	Glu
		835					840					845			
Leu	Leu	Leu	Gln	Val	Leu	Ser	Val	Gly	Lys	Leu	Tyr	Asn	Pro	Asp	Val
		850				855					860				
Arg	Tyr	Ser	Phe	Asn	Ile	Pro	Ile	Glu	Asp	Lys	Pro	Gln	Gln	Phe	Tyr
						870					875				880
Trp	Asn	Ser	His	Gly	Pro	Trp	Gln	Ala	Cys	Ser	Lys	Pro	Cys	Gln	Gly
				885					890					895	
Glu	Arg	Lys	Arg	Lys	Leu	Val	Cys	Thr	Arg	Glu	Ser	Asp	Gln	Leu	Thr
			900					905					910		
Val	Ser	Asp	Gln	Arg	Cys	Asp	Arg	Leu	Pro	Gln	Pro	Gly	His	Ile	Thr
		915					920					925			
Glu	Pro	Cys	Gly	Thr	Asp	Cys	Asp	Leu	Arg	Trp	His	Val	Ala	Ser	Arg
		930				935					940				
Ser	Glu	Cys	Ser	Ala	Gln	Cys	Gly	Leu	Gly	Tyr	Arg	Thr	Leu	Asp	Ile
		945				950					955				960
Tyr	Cys	Ala	Lys	Tyr	Ser	Arg	Leu	Asp	Gly	Lys	Thr	Glu	Lys	Val	Asp
				965					970					975	
Asp	Gly	Phe	Cys	Ser	Ser	His	Pro	Lys	Pro	Ser	Asn	Arg	Glu	Lys	Cys
			980					985					990		

Ser Gly Glu Cys Asn Thr Gly Gly Trp Arg Tyr Ser Ala Trp Thr Glu  
 995 1000 1005

Cys Ser Lys Ser Cys Asp Gly Gly Thr Gln Arg Arg Arg Ala Ile  
 1010 1015 1020

Cys Val Asn Thr Arg Asn Asp Val Leu Asp Asp Ser Lys Cys Thr  
 1025 1030 1035

His Gln Glu Lys Val Thr Ile Gln Arg Cys Ser Glu Phe Pro Cys  
 1040 1045 1050

Pro Gln Trp Lys Ser Gly Asp Trp Ser Glu Val Arg Trp Glu Gly  
 1055 1060 1065

Cys Tyr Phe Pro  
 1070

<210> 61  
 <211> 1356  
 <212> PRT  
 <213> Homo Sapiens

<400> 61

Met Gln Ser Lys Val Leu Leu Ala Val Ala Leu Trp Leu Cys Val Glu  
 1 5 10 15

Thr Arg Ala Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro  
 20 25 30

Arg Leu Ser Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr  
 35 40 45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro  
 50 55 60

Asn Asn Gln Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser  
 65 70 75 80

Asp Gly Leu Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn  
 85 90 95

Asp Thr Gly Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser  
 100 105 110

Val Ile Tyr Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser  
115 120 125

Val Ser Asp Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys  
130 135 140

Thr Val Val Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser  
145 150 155 160

Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg  
165 170 175

Ile Ser Trp Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile  
180 185 190

Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser  
195 200 205

Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr  
210 215 220

Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu  
225 230 235 240

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile  
245 250 255

Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu  
260 265 270

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe  
275 280 285

Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu  
290 295 300

Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr  
305 310 315 320

Phe Val Arg Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met  
325 330 335

Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala  
340 345 350

Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly

355                      360                      365  
 Ile Pro Leu Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr  
 370                      375                      380  
 Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu  
 385                      390                      395                      400  
 Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val  
 405                      410                      415  
 Val Tyr Val Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val  
 420                      425                      430  
 Asp Ser Tyr Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr  
 435                      440                      445  
 Ala Ile Pro Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu  
 450                      455                      460  
 Glu Cys Ala Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr  
 465                      470                      475                      480  
 Pro Cys Glu Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys  
 485                      490                      495  
 Ile Glu Val Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys  
 500                      505                      510  
 Thr Val Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr  
 515                      520                      525  
 Lys Cys Glu Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser  
 530                      535                      540  
 Phe His Val Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln  
 545                      550                      555                      560  
 Pro Thr Glu Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser  
 565                      570                      575  
 Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro  
 580                      585                      590  
 Ile His Val Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr  
 595                      600                      605

Leu Trp Lys Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile  
 610 615 620

Leu Ile Met Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr  
 625 630 635 640

Val Cys Leu Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val  
 645 650 655

Arg Gln Leu Thr Val Leu Glu Arg Val Ala Pro Thr Ile Thr Gly Asn  
 660 665 670

Leu Glu Asn Gln Thr Thr Ser Ile Gly Glu Ser Ile Glu Val Ser Cys  
 675 680 685

Thr Ala Ser Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn  
 690 695 700

Glu Thr Leu Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg  
 705 710 715 720

Asn Leu Thr Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr  
 725 730 735

Cys Gln Ala Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe  
 740 745 750

Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Ile Ile Ile Leu  
 755 760 765

Val Gly Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile  
 770 775 780

Ile Leu Arg Thr Val Lys Arg Ala Asn Gly Gly Glu Leu Lys Thr Gly  
 785 790 795 800

Tyr Leu Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu His  
 805 810 815

Cys Glu Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp  
 820 825 830

Arg Leu Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val  
 835 840 845

Ile Glu Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Arg Thr  
 850 855 860

Val Ala Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg  
 865 870 875 880

Ala Leu Met Ser Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu  
 885 890 895

Asn Val Val Asn Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu  
 900 905 910

Met Val Ile Val Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu  
 915 920 925

Arg Ser Lys Arg Asn Glu Phe Val Pro Tyr Lys Thr Lys Gly Ala Arg  
 930 935 940

Phe Arg Gln Gly Lys Asp Tyr Val Gly Ala Ile Pro Val Asp Leu Lys  
 945 950 955 960

Arg Arg Leu Asp Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly  
 965 970 975

Phe Val Glu Glu Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Pro  
 980 985 990

Glu Asp Leu Tyr Lys Asp Phe Leu Thr Leu Glu His Leu Ile Cys Tyr  
 995 1000 1005

Ser Phe Gln Val Ala Lys Gly Met Glu Phe Leu Ala Ser Arg Lys  
 1010 1015 1020

Cys Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu Ser Glu  
 1025 1030 1035

Lys Asn Val Val Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile  
 1040 1045 1050

Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly Asp Ala Arg Leu Pro  
 1055 1060 1065

Leu Lys Trp Met Ala Pro Glu Thr Ile Phe Asp Arg Val Tyr Thr  
 1070 1075 1080

Ile	Gln	Ser	Asp	Val	Trp	Ser	Phe	Gly	Val	Leu	Leu	Trp	Glu	Ile
1085						1090					1095			
Phe	Ser	Leu	Gly	Ala	Ser	Pro	Tyr	Pro	Gly	Val	Lys	Ile	Asp	Glu
1100						1105					1110			
Glu	Phe	Cys	Arg	Arg	Leu	Lys	Glu	Gly	Thr	Arg	Met	Arg	Ala	Pro
1115						1120					1125			
Asp	Tyr	Thr	Thr	Pro	Glu	Met	Tyr	Gln	Thr	Met	Leu	Asp	Cys	Trp
1130						1135					1140			
His	Gly	Glu	Pro	Ser	Gln	Arg	Pro	Thr	Phe	Ser	Glu	Leu	Val	Glu
1145						1150					1155			
His	Leu	Gly	Asn	Leu	Leu	Gln	Ala	Asn	Ala	Gln	Gln	Asp	Gly	Lys
1160						1165					1170			
Asp	Tyr	Ile	Val	Leu	Pro	Ile	Ser	Glu	Thr	Leu	Ser	Met	Glu	Glu
1175						1180					1185			
Asp	Ser	Gly	Leu	Ser	Leu	Pro	Thr	Ser	Pro	Val	Ser	Cys	Met	Glu
1190						1195					1200			
Glu	Glu	Glu	Val	Cys	Asp	Pro	Lys	Phe	His	Tyr	Asp	Asn	Thr	Ala
1205						1210					1215			
Gly	Ile	Ser	Gln	Tyr	Leu	Gln	Asn	Ser	Lys	Arg	Lys	Ser	Arg	Pro
1220						1225					1230			
Val	Ser	Val	Lys	Thr	Phe	Glu	Asp	Ile	Pro	Leu	Glu	Glu	Pro	Glu
1235						1240					1245			
Val	Lys	Val	Ile	Pro	Asp	Asp	Asn	Gln	Thr	Asp	Ser	Gly	Met	Val
1250						1255					1260			
Leu	Ala	Ser	Glu	Glu	Leu	Lys	Thr	Leu	Glu	Asp	Arg	Thr	Lys	Leu
1265						1270					1275			
Ser	Pro	Ser	Phe	Gly	Gly	Met	Val	Pro	Ser	Lys	Ser	Arg	Glu	Ser
1280						1285					1290			
Val	Ala	Ser	Glu	Gly	Ser	Asn	Gln	Thr	Ser	Gly	Tyr	Gln	Ser	Gly
1295						1300					1305			
Tyr	His	Ser	Asp	Asp	Thr	Asp	Thr	Thr	Val	Tyr	Ser	Ser	Glu	Glu

1310                      1315                      1320  
 Ala Glu Leu Leu Lys Leu Ile Glu Ile Gly Val Gln Thr Gly Ser  
 1325                      1330                      1335  
 Thr Ala Gln Ile Leu Gln Pro Asp Ser Gly Thr Thr Leu Ser Ser  
 1340                      1345                      1350  
 Pro Pro Val  
 1355  
 <210> 62  
 <211> 468  
 <212> PRT  
 <213> Homo Sapiens  
 <400> 62  
 Met Gly Arg Gly Trp Gly Phe Leu Phe Gly Leu Leu Gly Ala Val Trp  
 1                      5                      10                      15  
 Leu Leu Ser Ser Gly His Gly Glu Glu Gln Pro Pro Glu Thr Ala Ala  
 20                      25                      30  
 Gln Arg Cys Phe Cys Gln Val Ser Gly Tyr Leu Asp Asp Cys Thr Cys  
 35                      40                      45  
 Asp Val Glu Thr Ile Asp Arg Phe Asn Asn Tyr Arg Leu Phe Pro Arg  
 50                      55                      60  
 Leu Gln Lys Leu Leu Glu Ser Asp Tyr Phe Arg Tyr Tyr Lys Val Asn  
 65                      70                      75                      80  
 Leu Lys Arg Pro Cys Pro Phe Trp Asn Asp Ile Ser Gln Cys Gly Arg  
 85                      90                      95  
 Arg Asp Cys Ala Val Lys Pro Cys Gln Ser Asp Glu Val Pro Asp Gly  
 100                      105                      110  
 Ile Lys Ser Ala Ser Tyr Lys Tyr Ser Glu Glu Ala Asn Asn Leu Ile  
 115                      120                      125  
 Glu Glu Cys Glu Gln Ala Glu Arg Leu Gly Ala Val Asp Glu Ser Leu  
 130                      135                      140  
 Ser Glu Glu Thr Gln Lys Ala Val Leu Gln Trp Thr Lys His Asp Asp  
 145                      150                      155                      160



Ser Ser Asp Asn Phe Cys Glu Ala Asp Asp Ile Gln Ser Pro Glu Ala  
 165 170 175

Glu Tyr Val Asp Leu Leu Leu Asn Pro Glu Arg Tyr Thr Gly Tyr Lys  
 180 185 190

Gly Pro Asp Ala Trp Lys Ile Trp Asn Val Ile Tyr Glu Glu Asn Cys  
 195 200 205

Phe Lys Pro Gln Thr Ile Lys Arg Pro Leu Asn Pro Leu Ala Ser Gly  
 210 215 220

Gln Gly Thr Ser Glu Glu Asn Thr Phe Tyr Ser Trp Leu Glu Gly Leu  
 225 230 235 240

Cys Val Glu Lys Arg Ala Phe Tyr Arg Leu Ile Ser Gly Leu His Ala  
 245 250 255

Ser Ile Asn Val His Leu Ser Ala Arg Tyr Leu Leu Gln Glu Thr Trp  
 260 265 270

Leu Glu Lys Lys Trp Gly His Asn Ile Thr Glu Phe Gln Gln Arg Phe  
 275 280 285

Asp Gly Ile Leu Thr Glu Gly Glu Gly Pro Arg Arg Leu Lys Asn Leu  
 290 295 300

Tyr Phe Leu Tyr Leu Ile Glu Leu Arg Ala Leu Ser Lys Val Leu Pro  
 305 310 315 320

Phe Phe Glu Arg Pro Asp Phe Gln Leu Phe Thr Gly Asn Lys Ile Gln  
 325 330 335

Asp Glu Glu Asn Lys Met Leu Leu Leu Glu Ile Leu His Glu Ile Lys  
 340 345 350

Ser Phe Pro Leu His Phe Asp Glu Asn Ser Phe Phe Ala Gly Asp Lys  
 355 360 365

Lys Glu Ala His Lys Leu Lys Glu Asp Phe Arg Leu His Phe Arg Asn  
 370 375 380

Ile Ser Arg Ile Met Asp Cys Val Gly Cys Phe Lys Cys Arg Leu Trp  
 385 390 395 400

Gly Lys Leu Gln Thr Gln Gly Leu Gly Thr Ala Leu Lys Ile Leu Phe  
 405 410 415

Ser Glu Lys Leu Ile Ala Asn Met Pro Glu Ser Gly Pro Ser Tyr Glu  
 420 425 430

Phe His Leu Thr Arg Gln Glu Ile Val Ser Leu Phe Asn Ala Phe Gly  
 435 440 445

Arg Ile Ser Thr Ser Val Lys Glu Leu Glu Asn Phe Arg Asn Leu Leu  
 450 455 460

Gln Asn Ile His  
 465

<210> 63  
 <211> 228  
 <212> PRT  
 <213> Homo Sapiens

<400> 63

Met Gln Pro Arg Arg Gln Arg Leu Pro Ala Pro Trp Ser Gly Pro Arg  
 1 5 10 15

Gly Pro Arg Pro Thr Ala Pro Leu Leu Ala Leu Leu Leu Leu Leu Ala  
 20 25 30

Pro Val Ala Ala Pro Ala Gly Ser Gly Gly Pro Asp Asp Pro Gly Gln  
 35 40 45

Pro Gln Asp Ala Gly Val Pro Arg Arg Leu Leu Gln Gln Lys Ala Arg  
 50 55 60

Ala Ala Leu His Phe Phe Asn Phe Arg Ser Gly Ser Pro Ser Ala Leu  
 65 70 75 80

Arg Val Leu Ala Glu Val Gln Glu Gly Arg Ala Trp Ile Asn Pro Lys  
 85 90 95

Glu Gly Cys Lys Val His Val Val Phe Ser Thr Glu Arg Tyr Asn Pro  
 100 105 110

Glu Ser Leu Leu Gln Glu Gly Glu Gly Arg Leu Gly Lys Cys Ser Ala  
 115 120 125

Arg Val Phe Phe Lys Asn Gln Lys Pro Arg Pro Thr Ile Asn Val Thr  
 130 135 140

Cys Thr Arg Leu Ile Glu Lys Lys Lys Arg Gln Gln Glu Asp Tyr Leu  
 145 150 155 160

Leu Tyr Lys Gln Met Lys Gln Leu Lys Asn Pro Leu Glu Ile Val Ser  
 165 170 175

Ile Pro Asp Asn His Gly His Ile Asp Pro Ser Leu Arg Leu Ile Trp  
 180 185 190

Asp Leu Ala Phe Leu Gly Ser Ser Tyr Val Met Trp Glu Met Thr Thr  
 195 200 205

Gln Val Ser His Tyr Tyr Leu Ala Gln Leu Thr Ser Val Arg Gln Trp  
 210 215 220

Val Arg Lys Thr  
 225

<210> 64  
 <211> 747  
 <212> PRT  
 <213> Homo Sapiens

<400> 64

Met Arg Arg Cys Asn Ser Gly Ser Gly Pro Pro Pro Ser Leu Leu Leu  
 1 5 10 15

Leu Leu Leu Trp Leu Leu Ala Val Pro Gly Ala Asn Ala Ala Pro Arg  
 20 25 30

Ser Ala Leu Tyr Ser Pro Ser Asp Pro Leu Thr Leu Leu Gln Ala Asp  
 35 40 45

Thr Val Arg Gly Ala Val Leu Gly Ser Arg Ser Ala Trp Ala Val Glu  
 50 55 60

Phe Phe Ala Ser Trp Cys Gly His Cys Ile Ala Phe Ala Pro Thr Trp  
 65 70 75 80

Lys Ala Leu Ala Glu Asp Val Lys Ala Trp Arg Pro Ala Leu Tyr Leu  
 85 90 95

Ala Ala Leu Asp Cys Ala Glu Glu Thr Asn Ser Ala Val Cys Arg Asp  
 100 105 110

Phe Asn Ile Pro Gly Phe Pro Thr Val Arg Phe Phe Lys Ala Phe Thr  
 115 120 125  
 Lys Asn Gly Ser Gly Ala Val Phe Pro Val Ala Gly Ala Asp Val Gln  
 130 135 140  
 Thr Leu Arg Glu Arg Leu Ile Asp Ala Leu Glu Ser His His Asp Thr  
 145 150 155 160  
 Trp Pro Pro Ala Cys Pro Pro Leu Glu Pro Ala Lys Leu Glu Glu Ile  
 165 170 175  
 Asp Gly Phe Phe Ala Arg Asn Asn Glu Glu Tyr Leu Ala Leu Ile Phe  
 180 185 190  
 Glu Lys Gly Gly Ser Tyr Leu Gly Arg Glu Val Ala Leu Asp Leu Ser  
 195 200 205  
 Gln His Lys Gly Val Ala Val Arg Arg Val Leu Asn Thr Glu Ala Asn  
 210 215 220  
 Val Val Arg Lys Phe Gly Val Thr Asp Phe Pro Ser Cys Tyr Leu Leu  
 225 230 235 240  
 Phe Arg Asn Gly Ser Val Ser Arg Val Pro Val Leu Met Glu Ser Arg  
 245 250 255  
 Ser Phe Tyr Thr Ala Tyr Leu Gln Arg Leu Ser Gly Leu Thr Arg Glu  
 260 265 270  
 Ala Ala Gln Thr Thr Val Ala Pro Thr Thr Ala Asn Lys Ile Ala Pro  
 275 280 285  
 Thr Val Trp Lys Leu Ala Asp Arg Ser Lys Ile Tyr Met Ala Asp Leu  
 290 295 300  
 Glu Ser Ala Leu His Tyr Ile Leu Arg Ile Glu Val Gly Arg Phe Pro  
 305 310 315 320  
 Val Leu Glu Gly Gln Arg Leu Val Ala Leu Lys Lys Phe Val Ala Val  
 325 330 335  
 Leu Ala Lys Tyr Phe Pro Gly Arg Pro Leu Val Gln Asn Phe Leu His  
 340 345 350  
 Ser Val Asn Glu Trp Leu Lys Arg Gln Lys Arg Asn Lys Ile Pro Tyr

355		360		365
Ser Phe Phe Lys Thr Ala Leu Asp Asp Arg Lys Glu Gly Ala Val Leu				
370		375		380
Ala Lys Lys Val Asn Trp Ile Gly Cys Gln Gly Ser Glu Pro His Phe				
385		390		395
Arg Gly Phe Pro Cys Ser Leu Trp Val Leu Phe His Phe Leu Thr Val				
	405		410	415
Gln Ala Ala Arg Gln Asn Val Asp His Ser Gln Glu Ala Ala Lys Ala				
	420		425	430
Lys Glu Val Leu Pro Ala Ile Arg Gly Tyr Val His Tyr Phe Phe Gly				
	435		440	445
Cys Arg Asp Cys Ala Ser His Phe Glu Gln Met Ala Ala Ala Ser Met				
	450		455	460
His Arg Val Gly Ser Pro Asn Ala Ala Val Leu Trp Leu Trp Ser Ser				
465		470		475
His Asn Arg Val Asn Ala Arg Leu Ala Gly Ala Pro Ser Glu Asp Pro				
	485		490	495
Gln Phe Pro Lys Val Gln Trp Pro Pro Arg Glu Leu Cys Ser Ala Cys				
	500		505	510
His Asn Glu Arg Leu Asp Val Pro Val Trp Asp Val Glu Ala Thr Leu				
	515		520	525
Asn Phe Leu Lys Ala His Phe Ser Pro Ser Asn Ile Ile Leu Asp Phe				
	530		535	540
Pro Ala Ala Gly Ser Ala Ala Arg Arg Asp Val Gln Asn Val Ala Ala				
545		550		555
Ala Pro Glu Leu Ala Met Gly Ala Leu Glu Leu Glu Ser Arg Asn Ser				
	565		570	575
Thr Leu Asp Pro Gly Lys Pro Glu Met Met Lys Ser Pro Thr Asn Thr				
	580		585	590
Thr Pro His Val Pro Ala Glu Gly Pro Glu Ala Ser Arg Pro Pro Lys				
	595		600	605

Leu His Pro Gly Leu Arg Ala Ala Pro Gly Gln Glu Pro Pro Glu His  
610 615 620

Met Ala Glu Leu Gln Arg Asn Glu Gln Glu Gln Pro Leu Gly Gln Trp  
625 630 635 640

His Leu Ser Lys Arg Asp Thr Gly Ala Ala Leu Leu Ala Glu Ser Arg  
645 650 655

Ala Glu Lys Asn Arg Leu Trp Gly Pro Leu Glu Val Arg Arg Val Gly  
660 665 670

Arg Ser Ser Lys Gln Leu Val Asp Ile Pro Glu Gly Gln Leu Glu Ala  
675 680 685

Arg Ala Gly Arg Gly Arg Gly Gln Trp Leu Gln Val Leu Gly Gly Gly  
690 695 700

Phe Ser Tyr Leu Asp Ile Ser Leu Cys Val Gly Leu Tyr Ser Leu Ser  
705 710 715 720

Phe Met Gly Leu Leu Ala Met Tyr Thr Tyr Phe Gln Ala Lys Ile Arg  
725 730 735

Ala Leu Lys Gly His Ala Gly His Pro Ala Ala  
740 745

<210> 65  
<211> 1163  
<212> PRT  
<213> Homo Sapiens

<400> 65

Met Val Trp Cys Leu Gly Leu Ala Val Leu Ser Leu Val Ile Ser Gln  
1 5 10 15

Gly Ala Asp Gly Arg Gly Lys Pro Glu Val Val Ser Val Val Gly Arg  
20 25 30

Ala Glu Glu Ser Val Val Leu Gly Cys Asp Leu Leu Pro Pro Ala Gly  
35 40 45

Arg Pro Pro Leu His Val Ile Glu Trp Leu Arg Phe Gly Phe Leu Leu  
50 55 60

Pro Ile Phe Ile Gln Phe Gly Leu Tyr Ser Pro Arg Ile Asp Pro Asp  
 65 70 75 80

Tyr Val Gly Arg Val Arg Leu Gln Lys Gly Ala Ser Leu Gln Ile Glu  
 85 90 95

Gly Leu Arg Val Glu Asp Gln Gly Trp Tyr Glu Cys Arg Val Phe Phe  
 100 105 110

Leu Asp Gln His Ile Pro Glu Asp Asp Phe Ala Asn Gly Ser Trp Val  
 115 120 125

His Leu Thr Val Asn Ser Pro Pro Gln Phe Gln Glu Thr Pro Pro Ala  
 130 135 140

Val Leu Glu Val Gln Glu Leu Glu Pro Val Thr Leu Arg Cys Val Ala  
 145 150 155 160

Arg Gly Ser Pro Leu Pro His Val Thr Trp Lys Leu Arg Gly Lys Asp  
 165 170 175

Leu Gly Gln Gly Gln Gly Gln Val Gln Val Gln Asn Gly Thr Leu Arg  
 180 185 190

Ile Arg Arg Val Glu Arg Gly Ser Ser Gly Val Tyr Thr Cys Gln Ala  
 195 200 205

Ser Ser Thr Glu Gly Ser Ala Thr His Ala Thr Gln Leu Leu Val Leu  
 210 215 220

Gly Pro Pro Val Ile Val Val Pro Pro Lys Asn Ser Thr Val Asn Ala  
 225 230 235 240

Ser Gln Asp Val Ser Leu Ala Cys His Ala Glu Ala Tyr Pro Ala Asn  
 245 250 255

Leu Thr Tyr Ser Trp Phe Gln Asp Asn Ile Asn Val Phe His Ile Ser  
 260 265 270

Arg Leu Gln Pro Arg Val Gln Ile Leu Val Asp Gly Ser Leu Arg Leu  
 275 280 285

Leu Ala Thr Gln Pro Asp Asp Ala Gly Cys Tyr Thr Cys Val Pro Ser  
 290 295 300

Asn Gly Leu Leu His Pro Pro Ser Ala Ser Ala Tyr Leu Thr Val Leu

305		310		315		320
Cys Met Pro Gly Val Ile Arg Cys Pro Val Arg Ala Asn Pro Pro Leu						
	325			330		335
Leu Phe Val Ser Trp Thr Lys Asp Gly Lys Ala Leu Gln Leu Asp Lys						
	340			345		350
Phe Pro Gly Trp Ser Gln Gly Thr Glu Gly Ser Leu Ile Ile Ala Leu						
	355			360		365
Gly Asn Glu Asp Ala Leu Gly Glu Tyr Ser Cys Thr Pro Tyr Asn Ser						
	370			375		380
Leu Gly Thr Ala Gly Pro Ser Pro Val Thr Arg Val Leu Leu Lys Ala						
	385			390		395
Pro Pro Ala Phe Ile Glu Arg Pro Lys Glu Glu Tyr Phe Gln Glu Val						
		405		410		415
Gly Arg Glu Leu Leu Ile Pro Cys Ser Ala Gln Gly Asp Pro Pro Pro						
	420			425		430
Val Val Ser Trp Thr Lys Val Gly Arg Gly Leu Gln Gly Gln Ala Gln						
	435			440		445
Val Asp Ser Asn Ser Ser Leu Ile Leu Arg Pro Leu Thr Lys Glu Ala						
	450			455		460
His Gly His Trp Glu Cys Ser Ala Ser Asn Ala Val Ala Arg Val Ala						
	465			470		475
Thr Ser Thr Asn Val Tyr Val Leu Gly Thr Ser Pro His Val Val Thr						
		485		490		495
Asn Val Ser Val Val Ala Leu Pro Lys Gly Ala Asn Val Ser Trp Glu						
	500			505		510
Pro Gly Phe Asp Gly Gly Tyr Leu Gln Arg Phe Ser Val Trp Tyr Thr						
	515			520		525
Pro Leu Ala Lys Arg Pro Asp Arg Met His His Asp Trp Val Ser Leu						
	530			535		540
Ala Val Pro Val Gly Ala Ala His Leu Leu Val Pro Gly Leu Gln Pro						
	545			550		555
						560



His Thr Gln Tyr Gln Phe Ser Val Leu Ala Gln Asn Lys Leu Gly Ser  
 565 570 575

Gly Pro Phe Ser Glu Ile Val Leu Ser Ala Pro Glu Gly Leu Pro Thr  
 580 585 590

Thr Pro Ala Ala Pro Gly Leu Pro Pro Thr Glu Ile Pro Pro Pro Leu  
 595 600 605

Ser Pro Pro Arg Gly Leu Val Ala Val Arg Thr Pro Arg Gly Val Leu  
 610 615 620

Leu His Trp Asp Pro Pro Glu Leu Val Pro Lys Arg Leu Asp Gly Tyr  
 625 630 635 640

Val Leu Glu Gly Arg Gln Gly Ser Gln Gly Trp Glu Val Leu Asp Pro  
 645 650 655

Ala Val Ala Gly Thr Glu Thr Glu Leu Leu Val Pro Gly Leu Ile Lys  
 660 665 670

Asp Val Leu Tyr Glu Phe Arg Leu Val Ala Phe Ala Gly Ser Phe Val  
 675 680 685

Ser Asp Pro Ser Asn Thr Ala Asn Val Ser Thr Ser Gly Leu Glu Val  
 690 695 700

Tyr Pro Ser Arg Thr Gln Leu Pro Gly Leu Leu Pro Gln Pro Val Leu  
 705 710 715 720

Ala Gly Val Val Gly Gly Val Cys Phe Leu Gly Val Ala Val Leu Val  
 725 730 735

Ser Ile Leu Ala Gly Cys Leu Leu Asn Arg Arg Arg Ala Ala Arg Arg  
 740 745 750

Arg Arg Lys Arg Leu Arg Gln Asp Pro Pro Leu Ile Phe Ser Pro Thr  
 755 760 765

Gly Lys Ser Ala Ala Pro Ser Ala Leu Gly Ser Gly Ser Pro Asp Ser  
 770 775 780

Val Ala Lys Leu Lys Leu Gln Gly Ser Pro Val Pro Ser Leu Arg Gln  
 785 790 795 800

Ser Leu Leu Trp Gly Asp Pro Ala Gly Thr Pro Ser Pro His Pro Asp  
805 810 815

Pro Pro Ser Ser Arg Gly Pro Leu Pro Leu Glu Pro Ile Cys Arg Gly  
820 825 830

Pro Asp Gly Arg Phe Val Met Gly Pro Thr Val Ala Ala Pro Gln Glu  
835 840 845

Arg Ser Gly Arg Glu Gln Ala Glu Pro Arg Thr Pro Ala Gln Arg Leu  
850 855 860

Ala Arg Ser Phe Asp Cys Ser Ser Ser Ser Pro Ser Gly Ala Pro Gln  
865 870 875 880

Pro Leu Cys Ile Glu Asp Ile Ser Pro Val Ala Pro Pro Pro Ala Ala  
885 890 895

Pro Pro Ser Pro Leu Pro Gly Pro Gly Pro Leu Leu Gln Tyr Leu Ser  
900 905 910

Leu Pro Phe Phe Arg Glu Met Asn Val Asp Gly Asp Trp Pro Pro Leu  
915 920 925

Glu Glu Pro Ser Pro Ala Ala Pro Pro Asp Tyr Met Asp Thr Arg Arg  
930 935 940

Cys Pro Thr Ser Ser Phe Leu Arg Ser Pro Glu Thr Pro Pro Val Ser  
945 950 955 960

Pro Arg Glu Ser Leu Pro Gly Ala Val Val Gly Ala Gly Ala Thr Ala  
965 970 975

Glu Pro Pro Tyr Thr Ala Leu Ala Asp Trp Thr Leu Arg Glu Arg Leu  
980 985 990

Leu Pro Gly Leu Leu Pro Ala Ala Pro Arg Gly Ser Leu Thr Ser Gln  
995 1000 1005

Ser Ser Gly Arg Gly Ser Ala Ser Phe Leu Arg Pro Pro Ser Thr  
1010 1015 1020

Ala Pro Ser Ala Gly Gly Ser Tyr Leu Ser Pro Ala Pro Gly Asp  
1025 1030 1035

Thr Ser Ser Trp Ala Ser Gly Pro Glu Arg Trp Pro Arg Arg Glu  
1040 1045 1050

His Val Val Thr Val Ser Lys Arg Arg Asn Thr Ser Val Asp Glu  
1055 1060 1065

Asn Tyr Glu Trp Asp Ser Glu Phe Pro Gly Asp Met Glu Leu Leu  
1070 1075 1080

Glu Thr Leu His Leu Gly Leu Ala Ser Ser Arg Leu Arg Pro Glu  
1085 1090 1095

Ala Glu Thr Glu Leu Gly Val Lys Thr Pro Glu Glu Gly Cys Leu  
1100 1105 1110

Leu Asn Thr Ala His Val Thr Gly Pro Glu Ala Arg Cys Ala Ala  
1115 1120 1125

Leu Arg Glu Glu Phe Leu Ala Phe Arg Arg Arg Arg Asp Ala Thr  
1130 1135 1140

Arg Ala Arg Leu Pro Ala Tyr Arg Gln Pro Val Pro His Pro Glu  
1145 1150 1155

Gln Ala Thr Leu Leu  
1160

<210> 66  
<211> 87  
<212> PRT  
<213> Homo Sapiens

<400> 66

Met Ala Gly Ala Ser Leu Gly Ala Arg Phe Tyr Arg Gln Ile Lys Arg  
1 5 10 15

His Pro Gly Ile Ile Pro Met Ile Gly Leu Ile Cys Leu Gly Met Gly  
20 25 30

Ser Ala Ala Leu Tyr Leu Leu Arg Leu Ala Leu Arg Ser Pro Asp Val  
35 40 45

Cys Trp Asp Arg Lys Asn Asn Pro Glu Pro Trp Asn Arg Leu Ser Pro  
50 55 60

Asn Asp Gln Tyr Lys Phe Leu Ala Val Ser Thr Asp Tyr Lys Lys Leu  
65 70 75 80

Lys Lys Asp Arg Pro Asp Phe  
85

<210> 67  
<211> 1241  
<212> PRT  
<213> Homo Sapiens

<400> 67.

Met Ile Met Phe Pro Leu Phe Gly Lys Ile Ser Leu Gly Ile Leu Ile  
1 5 10 15

Phe Val Leu Ile Glu Gly Asp Phe Pro Ser Leu Thr Ala Gln Thr Tyr  
20 25 30

Leu Ser Ile Glu Glu Ile Gln Glu Pro Lys Ser Ala Val Ser Phe Leu  
35 40 45

Leu Pro Glu Glu Ser Thr Asp Leu Ser Leu Ala Thr Lys Lys Lys Gln  
50 55 60

Pro Leu Asp Arg Arg Glu Thr Glu Arg Gln Trp Leu Ile Arg Arg Arg  
65 70 75 80

Arg Ser Ile Leu Phe Pro Asn Gly Val Lys Ile Cys Pro Asp Glu Ser  
85 90 95

Val Ala Glu Ala Val Ala Asn His Val Lys Tyr Phe Lys Val Arg Val  
100 105 110

Cys Gln Glu Ala Val Trp Glu Ala Phe Arg Thr Phe Trp Asp Arg Leu  
115 120 125

Pro Gly Arg Glu Glu Tyr His Tyr Trp Met Asn Leu Cys Glu Asp Gly  
130 135 140

Val Thr Ser Ile Phe Glu Met Gly Thr Asn Phe Ser Glu Ser Val Glu  
145 150 155 160

His Arg Ser Leu Ile Met Lys Lys Leu Thr Tyr Ala Lys Glu Thr Val  
165 170 175

Ser Ser Ser Glu Leu Ser Ser Pro Val Pro Val Gly Asp Thr Ser Thr  
180 185 190

Leu Gly Asp Thr Thr Leu Ser Val Pro His Pro Glu Val Asp Ala Tyr  
 195 200 205

Glu Gly Ala Ser Glu Ser Ser Leu Glu Arg Pro Glu Glu Ser Ile Ser  
 210 215 220

Asn Glu Ile Glu Asn Val Ile Glu Glu Ala Thr Lys Pro Ala Gly Glu  
 225 230 235 240

Gln Ile Ala Glu Phe Ser Ile His Leu Leu Gly Lys Gln Tyr Arg Glu  
 245 250 255

Glu Leu Gln Asp Ser Ser Ser Phe His His Gln His Leu Glu Glu Glu  
 260 265 270

Phe Ile Ser Glu Val Glu Asn Ala Phe Thr Gly Leu Pro Gly Tyr Lys  
 275 280 285

Glu Ile Arg Val Leu Glu Phe Arg Ser Pro Lys Glu Asn Asp Ser Gly  
 290 295 300

Val Asp Val Tyr Tyr Ala Val Thr Phe Asn Gly Glu Ala Ile Ser Asn  
 305 310 315 320

Thr Thr Trp Asp Leu Ile Ser Leu His Ser Asn Lys Val Glu Asn His  
 325 330 335

Gly Leu Val Glu Leu Asp Asp Lys Pro Thr Val Val Tyr Thr Ile Ser  
 340 345 350

Asn Phe Arg Asp Tyr Ile Ala Glu Thr Leu Gln Gln Asn Phe Leu Leu  
 355 360 365

Gly Asn Ser Ser Leu Asn Pro Asp Pro Asp Ser Leu Gln Leu Ile Asn  
 370 375 380

Val Arg Gly Val Leu Arg His Gln Thr Glu Asp Leu Val Trp Asn Thr  
 385 390 395 400

Gln Ser Ser Ser Leu Gln Ala Thr Pro Ser Ser Ile Leu Asp Asn Thr  
 405 410 415

Phe Gln Ala Ala Trp Pro Ser Ala Asp Glu Ser Ile Thr Ser Ser Ile  
 420 425 430

Pro Pro Leu Asp Phe Ser Ser Gly Pro Pro Ser Ala Thr Gly Arg Glu

435		440		445
Leu Trp Ser Glu Ser Pro Leu Gly Asp Leu Val Ser Thr His Lys Leu				
450		455		460
Ala Phe Pro Ser Lys Met Gly Leu Ser Ser Ser Pro Glu Val Leu Glu				
465		470		475
				480
Val Ser Ser Leu Thr Leu His Ser Val Thr Pro Ala Val Leu Gln Thr				
	485		490	495
Gly Leu Pro Val Ala Ser Glu Glu Arg Thr Ser Gly Ser His Leu Val				
	500		505	510
Glu Asp Gly Leu Ala Asn Val Glu Glu Ser Glu Asp Phe Leu Ser Ile				
	515		520	525
Asp Ser Leu Pro Ser Ser Ser Phe Thr Gln Pro Val Pro Lys Glu Thr				
	530		535	540
Ile Pro Ser Met Glu Asp Ser Asp Val Ser Leu Thr Ser Ser Pro Tyr				
545		550		555
				560
Leu Thr Ser Ser Ile Pro Phe Gly Leu Asp Ser Leu Thr Ser Lys Val				
	565		570	575
Lys Asp Gln Leu Lys Val Ser Pro Phe Leu Pro Asp Ala Ser Met Glu				
	580		585	590
Lys Glu Leu Ile Phe Asp Gly Gly Leu Gly Ser Gly Ser Gly Gln Lys				
	595		600	605
Val Asp Leu Ile Thr Trp Pro Trp Ser Glu Thr Ser Ser Glu Lys Ser				
610		615		620
Ala Glu Pro Leu Ser Lys Pro Trp Leu Glu Asp Asp Asp Ser Leu Leu				
625		630		635
				640
Pro Ala Glu Ile Glu Asp Lys Lys Leu Val Leu Val Asp Lys Met Asp				
	645		650	655
Ser Thr Asp Gln Ile Ser Lys His Ser Lys Tyr Glu His Asp Asp Arg				
	660		665	670
Ser Thr His Phe Pro Glu Glu Glu Pro Leu Ser Gly Pro Ala Val Pro				
675		680		685

Ile Phe Ala Asp Thr Ala Ala Glu Ser Ala Ser Leu Thr Leu Pro Lys  
 690 695 700

His Ile Ser Glu Val Pro Gly Val Asp Asp Cys Ser Val Thr Lys Ala  
 705 710 715 720

Pro Leu Ile Leu Thr Ser Val Ala Ile Ser Ala Ser Thr Asp Lys Ser  
 725 730 735

Asp Gln Ala Asp Ala Ile Leu Arg Glu Asp Met Glu Gln Ile Thr Glu  
 740 745 750

Ser Ser Asn Tyr Glu Trp Phe Asp Ser Glu Val Ser Met Val Lys Pro  
 755 760 765

Asp Met Gln Thr Leu Trp Thr Ile Leu Pro Glu Ser Glu Arg Val Trp  
 770 775 780

Thr Arg Thr Ser Ser Leu Glu Lys Leu Ser Arg Asp Ile Leu Ala Ser  
 785 790 795 800

Thr Pro Gln Ser Ala Asp Arg Leu Trp Leu Ser Val Thr Gln Ser Thr  
 805 810 815

Lys Leu Pro Pro Thr Thr Ile Ser Thr Leu Leu Glu Asp Glu Val Ile  
 820 825 830

Met Gly Val Gln Asp Ile Ser Leu Glu Leu Asp Arg Ile Gly Thr Asp  
 835 840 845

Tyr Tyr Gln Pro Glu Gln Val Gln Glu Gln Asn Gly Lys Val Gly Ser  
 850 855 860

Tyr Val Glu Met Ser Thr Ser Val His Ser Thr Glu Met Val Ser Val  
 865 870 875 880

Ala Trp Pro Thr Glu Gly Gly Asp Asp Leu Ser Tyr Thr Gln Thr Ser  
 885 890 895

Gly Ala Leu Val Val Phe Phe Ser Leu Arg Val Thr Asn Met Met Phe  
 900 905 910

Ser Glu Asp Leu Phe Asn Lys Asn Ser Leu Glu Tyr Lys Ala Leu Glu  
 915 920 925

Gln Arg Phe Leu Glu Leu Leu Val Pro Tyr Leu Gln Ser Asn Leu Thr  
 930 935 940

Gly Phe Gln Asn Leu Glu Ile Leu Asn Phe Arg Asn Gly Ser Ile Val  
 945 950 955 960

Val Asn Ser Arg Met Lys Phe Ala Asn Ser Val Pro Pro Asn Val Asn  
 965 970 975

Asn Ala Val Tyr Met Ile Leu Glu Asp Phe Cys Thr Thr Ala Tyr Asn  
 980 985 990

Thr Met Asn Leu Ala Ile Asp Lys Tyr Ser Leu Asp Val Glu Ser Gly  
 995 1000 1005

Asp Glu Ala Asn Pro Cys Lys Phe Gln Ala Cys Asn Glu Phe Ser  
 1010 1015 1020

Glu Cys Leu Val Asn Pro Trp Ser Gly Glu Ala Lys Cys Arg Cys  
 1025 1030 1035

Phe Pro Gly Tyr Leu Ser Val Glu Glu Arg Pro Cys Gln Ser Leu  
 1040 1045 1050

Cys Asp Leu Gln Pro Asp Phe Cys Leu Asn Asp Gly Lys Cys Asp  
 1055 1060 1065

Ile Met Pro Gly His Gly Ala Ile Cys Arg Cys Arg Val Gly Glu  
 1070 1075 1080

Asn Trp Trp Tyr Arg Gly Lys His Cys Glu Glu Phe Val Ser Glu  
 1085 1090 1095

Pro Val Ile Ile Gly Ile Thr Ile Ala Ser Val Val Gly Leu Leu  
 1100 1105 1110

Val Ile Phe Ser Ala Ile Ile Tyr Phe Phe Ile Arg Thr Leu Gln  
 1115 1120 1125

Ala His His Asp Arg Ser Glu Arg Glu Ser Pro Phe Ser Gly Ser  
 1130 1135 1140

Ser Arg Gln Pro Asp Ser Leu Ser Ser Ile Glu Asn Ala Val Lys  
 1145 1150 1155



Tyr Asn Pro Val Tyr Glu Ser His Arg Ala Gly Cys Glu Lys Tyr  
 1160 1165 1170

Glu Gly Pro Tyr Pro Gln His Pro Phe Tyr Ser Ser Ala Ser Gly  
 1175 1180 1185

Asp Val Ile Gly Gly Leu Ser Arg Glu Glu Ile Arg Gln Met Tyr  
 1190 1195 1200

Glu Ser Ser Glu Leu Ser Arg Glu Glu Ile Gln Glu Arg Met Arg  
 1205 1210 1215

Val Leu Glu Leu Tyr Ala Asn Asp Pro Glu Phe Ala Ala Phe Val  
 1220 1225 1230

Arg Glu Gln Gln Val Glu Glu Val  
 1235 1240

<210> 68  
 <211> 211  
 <212> PRT  
 <213> Homo Sapiens

<400> 68

Met Ala Asn Ala Gly Leu Gln Leu Leu Gly Phe Ile Leu Ala Phe Leu  
 1 5 10 15

Gly Trp Ile Gly Ala Ile Val Ser Thr Ala Leu Pro Gln Trp Arg Ile  
 20 25 30

Tyr Ser Tyr Ala Gly Asp Asn Ile Val Thr Ala Gln Ala Met Tyr Glu  
 35 40 45

Gly Leu Trp Met Ser Cys Val Ser Gln Ser Thr Gly Gln Ile Gln Cys  
 50 55 60

Lys Val Phe Asp Ser Leu Leu Asn Leu Ser Ser Thr Leu Gln Ala Thr  
 65 70 75 80

Arg Ala Leu Met Val Val Gly Ile Leu Leu Gly Val Ile Ala Ile Phe  
 85 90 95

Val Ala Thr Val Gly Met Lys Cys Met Lys Cys Leu Glu Asp Asp Glu  
 100 105 110

Val Gln Lys Met Arg Met Ala Val Ile Gly Gly Ala Ile Phe Leu Leu  
 115 120 125

Ala Gly Leu Ala Ile Leu Val Ala Thr Ala Trp Tyr Gly Asn Arg Ile  
 130 135 140

Val Gln Glu Phe Tyr Asp Pro Met Thr Pro Val Asn Ala Arg Tyr Glu  
 145 150 155 160

Phe Gly Gln Ala Leu Phe Thr Gly Trp Ala Ala Ala Ser Leu Cys Leu  
 165 170 175

Leu Gly Gly Ala Leu Leu Cys Cys Ser Cys Pro Arg Lys Thr Thr Ser  
 180 185 190

Tyr Pro Thr Pro Arg Pro Tyr Pro Lys Pro Ala Pro Ser Ser Gly Lys  
 195 200 205

Asp Tyr Val  
 210

<210> 69  
 <211> 360  
 <212> PRT  
 <213> Homo Sapiens

<400> 69

Met Asp Leu His Leu Phe Asp Tyr Ser Glu Pro Gly Asn Phe Ser Asp  
 1 5 10 15

Ile Ser Trp Pro Cys Asn Ser Ser Asp Cys Ile Val Val Asp Thr Val  
 20 25 30

Met Cys Pro Asn Met Pro Asn Lys Ser Val Leu Leu Tyr Thr Leu Ser  
 35 40 45

Phe Ile Tyr Ile Phe Ile Phe Val Ile Gly Met Ile Ala Asn Ser Val  
 50 55 60

Val Val Trp Val Asn Ile Gln Ala Lys Thr Thr Gly Tyr Asp Thr His  
 65 70 75 80

Cys Tyr Ile Leu Asn Leu Ala Ile Ala Asp Leu Trp Val Val Leu Thr  
 85 90 95

Ile Pro Val Trp Val Val Ser Leu Val Gln His Asn Gln Trp Pro Met  
 100 105 110

Gly Glu Leu Thr Cys Lys Val Thr His Leu Ile Phe Ser Ile Asn Leu  
 115 120 125

Phe Gly Ser Ile Phe Phe Leu Thr Cys Met Ser Val Asp Arg Tyr Leu  
 130 135 140

Ser Ile Thr Tyr Phe Thr Asn Thr Pro Ser Ser Arg Lys Lys Met Val  
 145 150 155 160

Arg Arg Val Val Cys Ile Leu Val Trp Leu Leu Ala Phe Cys Val Ser  
 165 170 175

Leu Pro Asp Thr Tyr Tyr Leu Lys Thr Val Thr Ser Ala Ser Asn Asn  
 180 185 190

Glu Thr Tyr Cys Arg Ser Phe Tyr Pro Glu His Ser Ile Lys Glu Trp  
 195 200 205

Leu Ile Gly Met Glu Leu Val Ser Val Val Leu Gly Phe Ala Val Pro  
 210 215 220

Phe Ser Ile Ile Ala Val Phe Tyr Phe Leu Leu Ala Arg Ala Ile Ser  
 225 230 235 240

Ala Ser Ser Asp Gln Glu Lys His Ser Ser Arg Lys Ile Ile Phe Ser  
 245 250 255

Tyr Val Val Val Phe Leu Val Cys Trp Leu Pro Tyr His Val Ala Val  
 260 265 270

Leu Leu Asp Ile Phe Ser Ile Leu His Tyr Ile Pro Phe Thr Cys Arg  
 275 280 285

Leu Glu His Ala Leu Phe Thr Ala Leu His Val Thr Gln Cys Leu Ser  
 290 295 300

Leu Val His Cys Cys Val Asn Pro Val Leu Tyr Ser Phe Ile Asn Arg  
 305 310 315 320

Asn Tyr Arg Tyr Glu Leu Met Lys Ala Phe Ile Phe Lys Tyr Ser Ala  
 325 330 335

Lys Thr Gly Leu Thr Lys Leu Ile Asp Ala Ser Arg Val Ser Glu Thr  
 340 345 350

Glu Tyr Ser Ala Leu Glu Gln Ser

355

360

<210> 70  
 <211> 2273  
 <212> PRT  
 <213> Homo Sapiens

<400> 70

Met Gly Phe Val Arg Gln Ile Gln Leu Leu Leu Trp Lys Asn Trp Thr  
 1 5 10 15

Leu Arg Lys Arg Gln Lys Ile Arg Phe Val Val Glu Leu Val Trp Pro  
 20 25 30

Leu Ser Leu Phe Leu Val Leu Ile Trp Leu Arg Asn Ala Asn Pro Leu  
 35 40 45

Tyr Ser His His Glu Cys His Phe Pro Asn Lys Ala Met Pro Ser Ala  
 50 55 60

Gly Met Leu Pro Trp Leu Gln Gly Ile Phe Cys Asn Val Asn Asn Pro  
 65 70 75 80

Cys Phe Gln Ser Pro Thr Pro Gly Glu Ser Pro Gly Ile Val Ser Asn  
 85 90 95

Tyr Asn Asn Ser Ile Leu Ala Arg Val Tyr Arg Asp Phe Gln Glu Leu  
 100 105 110

Leu Met Asn Ala Pro Glu Ser Gln His Leu Gly Arg Ile Trp Thr Glu  
 115 120 125

Leu His Ile Leu Ser Gln Phe Met Asp Thr Leu Arg Thr His Pro Glu  
 130 135 140

Arg Ile Ala Gly Arg Gly Ile Arg Ile Arg Asp Ile Leu Lys Asp Glu  
 145 150 155 160

Glu Thr Leu Thr Leu Phe Leu Ile Lys Asn Ile Gly Leu Ser Asp Ser  
 165 170 175

Val Val Tyr Leu Leu Ile Asn Ser Gln Val Arg Pro Glu Gln Phe Ala  
 180 185 190

His Gly Val Pro Asp Leu Ala Leu Lys Asp Ile Ala Cys Ser Glu Ala  
 195 200 205

Leu Leu Glu Arg Phe Ile Ile Phe Ser Gln Arg Arg Gly Ala Lys Thr  
 210 215 220  
 Val Arg Tyr Ala Leu Cys Ser Leu Ser Gln Gly Thr Leu Gln Trp Ile  
 225 230 235 240  
 Glu Asp Thr Leu Tyr Ala Asn Val Asp Phe Phe Lys Leu Phe Arg Val  
 245 250 255  
 Leu Pro Thr Leu Leu Asp Ser Arg Ser Gln Gly Ile Asn Leu Arg Ser  
 260 265 270  
 Trp Gly Gly Ile Leu Ser Asp Met Ser Pro Arg Ile Gln Glu Phe Ile  
 275 280 285  
 His Arg Pro Ser Met Gln Asp Leu Leu Trp Val Thr Arg Pro Leu Met  
 290 295 300  
 Gln Asn Gly Gly Pro Glu Thr Phe Thr Lys Leu Met Gly Ile Leu Ser  
 305 310 315 320  
 Asp Leu Leu Cys Gly Tyr Pro Glu Gly Gly Gly Ser Arg Val Leu Ser  
 325 330 335  
 Phe Asn Trp Tyr Glu Asp Asn Asn Tyr Lys Ala Phe Leu Gly Ile Asp  
 340 345 350  
 Ser Thr Arg Lys Asp Pro Ile Tyr Ser Tyr Asp Arg Arg Thr Thr Ser  
 355 360 365  
 Phe Cys Asn Ala Leu Ile Gln Ser Leu Glu Ser Asn Pro Leu Thr Lys  
 370 375 380  
 Ile Ala Trp Arg Ala Ala Lys Pro Leu Leu Met Gly Lys Ile Leu Tyr  
 385 390 395 400  
 Thr Pro Asp Ser Pro Ala Ala Arg Arg Ile Leu Lys Asn Ala Asn Ser  
 405 410 415  
 Thr Phe Glu Glu Leu Glu His Val Arg Lys Leu Val Lys Ala Trp Glu  
 420 425 430  
 Glu Val Gly Pro Gln Ile Trp Tyr Phe Phe Asp Asn Ser Thr Gln Met  
 435 440 445

Asn Met Ile Arg Asp Thr Leu Gly Asn Pro Thr Val Lys Asp Phe Leu  
450 455 460

Asn Arg Gln Leu Gly Glu Glu Gly Ile Thr Ala Glu Ala Ile Leu Asn  
465 470 475 480

Phe Leu Tyr Lys Gly Pro Arg Glu Ser Gln Ala Asp Asp Met Ala Asn  
485 490 495

Phe Asp Trp Arg Asp Ile Phe Asn Ile Thr Asp Arg Thr Leu Arg Leu  
500 505 510

Val Asn Gln Tyr Leu Glu Cys Leu Val Leu Asp Lys Phe Glu Ser Tyr  
515 520 525

Asn Asp Glu Thr Gln Leu Thr Gln Arg Ala Leu Ser Leu Leu Glu Glu  
530 535 540

Asn Met Phe Trp Ala Gly Val Val Phe Pro Asp Met Tyr Pro Trp Thr  
545 550 555 560

Ser Ser Leu Pro Pro His Val Lys Tyr Lys Ile Arg Met Asp Ile Asp  
565 570 575

Val Val Glu Lys Thr Asn Lys Ile Lys Asp Arg Tyr Trp Asp Ser Gly  
580 585 590

Pro Arg Ala Asp Pro Val Glu Asp Phe Arg Tyr Ile Trp Gly Gly Phe  
595 600 605

Ala Tyr Leu Gln Asp Met Val Glu Gln Gly Ile Thr Arg Ser Gln Val  
610 615 620

Gln Ala Glu Ala Pro Val Gly Ile Tyr Leu Gln Gln Met Pro Tyr Pro  
625 630 635 640

Cys Phe Val Asp Asp Ser Phe Met Ile Ile Leu Asn Arg Cys Phe Pro  
645 650 655

Ile Phe Met Val Leu Ala Trp Ile Tyr Ser Val Ser Met Thr Val Lys  
660 665 670

Ser Ile Val Leu Glu Lys Glu Leu Arg Leu Lys Glu Thr Leu Lys Asn  
675 680 685

Gln Gly Val Ser Asn Ala Val Ile Trp Cys Thr Trp Phe Leu Asp Ser

690		695		700
Phe Ser Ile Met Ser Met Ser Ile Phe Leu Leu Thr Ile Phe Ile Met				
705		710		715 720
His Gly Arg Ile Leu His Tyr Ser Asp Pro Phe Ile Leu Phe Leu Phe				
	725		730	735
Leu Leu Ala Phe Ser Thr Ala Thr Ile Met Leu Cys Phe Leu Leu Ser				
	740		745	750
Thr Phe Phe Ser Lys Ala Ser Leu Ala Ala Ala Cys Ser Gly Val Ile				
	755		760	765
Tyr Phe Thr Leu Tyr Leu Pro His Ile Leu Cys Phe Ala Trp Gln Asp				
	770		775	780
Arg Met Thr Ala Glu Leu Lys Lys Ala Val Ser Leu Leu Ser Pro Val				
785		790		795 800
Ala Phe Gly Phe Gly Thr Glu Tyr Leu Val Arg Phe Glu Glu Gln Gly				
	805		810	815
Leu Gly Leu Gln Trp Ser Asn Ile Gly Asn Ser Pro Thr Glu Gly Asp				
	820		825	830
Glu Phe Ser Phe Leu Leu Ser Met Gln Met Met Leu Leu Asp Ala Ala				
	835		840	845
Cys Tyr Gly Leu Leu Ala Trp Tyr Leu Asp Gln Val Phe Pro Gly Asp				
	850		855	860
Tyr Gly Thr Pro Leu Pro Trp Tyr Phe Leu Leu Gln Glu Ser Tyr Trp				
865		870		875 880
Leu Ser Gly Glu Gly Cys Ser Thr Arg Glu Glu Arg Ala Leu Glu Lys				
	885		890	895
Thr Glu Pro Leu Thr Glu Glu Thr Glu Asp Pro Glu His Pro Glu Gly				
	900		905	910
Ile His Asp Ser Phe Phe Glu Arg Glu His Pro Gly Trp Val Pro Gly				
	915		920	925
Val Cys Val Lys Asn Leu Val Lys Ile Phe Glu Pro Cys Gly Arg Pro				
	930		935	940

Ala Val Asp Arg Leu Asn Ile Thr Phe Tyr Glu Asn Gln Ile Thr Ala  
 945 950 955 960

Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Leu Ser Ile Leu  
 965 970 975

Thr Gly Leu Leu Pro Pro Thr Ser Gly Thr Val Leu Val Gly Gly Arg  
 980 985 990

Asp Ile Glu Thr Ser Leu Asp Ala Val Arg Gln Ser Leu Gly Met Cys  
 995 1000 1005

Pro Gln His Asn Ile<sup>a</sup> Leu Phe His His Leu Thr Val Ala Glu His  
 1010 1015 1020

Met Leu Phe Tyr Ala Gln Leu Lys Gly Lys Ser Gln Glu Glu Ala  
 1025 1030 1035

Gln Leu Glu Met Glu Ala Met Leu Glu Asp Thr Gly Leu His His  
 1040 1045 1050

Lys Arg Asn Glu Glu Ala Gln Asp Leu Ser Gly Gly Met Gln Arg  
 1055 1060 1065

Lys Leu Ser Val Ala Ile Ala Phe Val Gly Asp Ala Lys Val Val  
 1070 1075 1080

Ile Leu Asp Glu Pro Thr Ser Gly Val Asp Pro Tyr Ser Arg Arg  
 1085 1090 1095

Ser Ile Trp Asp Leu Leu Leu Lys Tyr Arg Ser Gly Arg Thr Ile  
 1100 1105 1110

Ile Met Pro Thr His His Met Asp Glu Ala Asp His Gln Gly Asp  
 1115 1120 1125

Arg Ile Ala Ile Ile Ala Gln Gly Arg Leu Tyr Cys Ser Gly Thr  
 1130 1135 1140

Pro Leu Phe Leu Lys Asn Cys Phe Gly Thr Gly Leu Tyr Leu Thr  
 1145 1150 1155

Leu Val Arg Lys Met Lys Asn Ile Gln Ser Gln Arg Lys Gly Ser  
 1160 1165 1170



Glu	Gly	Thr	Cys	Ser	Cys	Ser	Ser	Lys	Gly	Phe	Ser	Thr	Thr	Cys
1175						1180					1185			
Pro	Ala	His	Val	Asp	Asp	Leu	Thr	Pro	Glu	Gln	Val	Leu	Asp	Gly
1190						1195					1200			
Asp	Val	Asn	Glu	Leu	Met	Asp	Val	Val	Leu	His	His	Val	Pro	Glu
1205						1210					1215			
Ala	Lys	Leu	Val	Glu	Cys	Ile	Gly	Gln	Glu	Leu	Ile	Phe	Leu	Leu
1220						1225					1230			
Pro	Asn	Lys	Asn	Phe	Lys	His	Arg	Ala	Tyr	Ala	Ser	Leu	Phe	Arg
1235						1240					1245			
Glu	Leu	Glu	Glu	Thr	Leu	Ala	Asp	Leu	Gly	Leu	Ser	Ser	Phe	Gly
1250						1255					1260			
Ile	Ser	Asp	Thr	Pro	Leu	Glu	Glu	Ile	Phe	Leu	Lys	Val	Thr	Glu
1265						1270					1275			
Asp	Ser	Asp	Ser	Gly	Pro	Leu	Phe	Ala	Gly	Gly	Ala	Gln	Gln	Lys
1280						1285					1290			
Arg	Glu	Asn	Val	Asn	Pro	Arg	His	Pro	Cys	Leu	Gly	Pro	Arg	Glu
1295						1300					1305			
Lys	Ala	Gly	Gln	Thr	Pro	Gln	Asp	Ser	Asn	Val	Cys	Ser	Pro	Gly
1310						1315					1320			
Ala	Pro	Ala	Ala	His	Pro	Glu	Gly	Gln	Pro	Pro	Pro	Glu	Pro	Glu
1325						1330					1335			
Cys	Pro	Gly	Pro	Gln	Leu	Asn	Thr	Gly	Thr	Gln	Leu	Val	Leu	Gln
1340						1345					1350			
His	Val	Gln	Ala	Leu	Leu	Val	Lys	Arg	Phe	Gln	His	Thr	Ile	Arg
1355						1360					1365			
Ser	His	Lys	Asp	Phe	Leu	Ala	Gln	Ile	Val	Leu	Pro	Ala	Thr	Phe
1370						1375					1380			
Val	Phe	Leu	Ala	Leu	Met	Leu	Ser	Ile	Val	Ile	Leu	Pro	Phe	Gly
1385						1390					1395			

Glu	Tyr	Pro	Ala	Leu	Thr	Leu	His	Pro	Trp	Ile	Tyr	Gly	Gln	Gln
1400						1405					1410			
Tyr	Thr	Phe	Phe	Ser	Met	Asp	Glu	Pro	Gly	Ser	Glu	Gln	Phe	Thr
1415						1420					1425			
Val	Leu	Ala	Asp	Val	Leu	Leu	Asn	Lys	Pro	Gly	Phe	Gly	Asn	Arg
1430						1435					1440			
Cys	Leu	Lys	Glu	Gly	Trp	Leu	Pro	Glu	Tyr	Pro	Cys	Gly	Asn	Ser
1445						1450					1455			
Thr	Pro	Trp	Lys	Thr	Pro	Ser	Val	Ser	Pro	Asn	Ile	Thr	Gln	Leu
1460						1465					1470			
Phe	Gln	Lys	Gln	Lys	Trp	Thr	Gln	Val	Asn	Pro	Ser	Pro	Ser	Cys
1475						1480					1485			
Arg	Cys	Ser	Thr	Arg	Glu	Lys	Leu	Thr	Met	Leu	Pro	Glu	Cys	Pro
1490						1495					1500			
Glu	Gly	Ala	Gly	Gly	Leu	Pro	Pro	Pro	Gln	Arg	Thr	Gln	Arg	Ser
1505						1510					1515			
Thr	Glu	Ile	Leu	Gln	Asp	Leu	Thr	Asp	Arg	Asn	Ile	Ser	Asp	Phe
1520						1525					1530			
Leu	Val	Lys	Thr	Tyr	Pro	Ala	Leu	Ile	Arg	Ser	Ser	Leu	Lys	Ser
1535						1540					1545			
Lys	Phe	Trp	Val	Asn	Glu	Gln	Arg	Tyr	Gly	Gly	Ile	Ser	Ile	Gly
1550						1555					1560			
Gly	Lys	Leu	Pro	Val	Val	Pro	Ile	Thr	Gly	Glu	Ala	Leu	Val	Gly
1565						1570					1575			
Phe	Leu	Ser	Asp	Leu	Gly	Arg	Ile	Met	Asn	Val	Ser	Gly	Gly	Pro
1580						1585					1590			
Ile	Thr	Arg	Glu	Ala	Ser	Lys	Glu	Ile	Pro	Asp	Phe	Leu	Lys	His
1595						1600					1605			
Leu	Glu	Thr	Glu	Asp	Asn	Ile	Lys	Val	Trp	Phe	Asn	Asn	Lys	Gly
1610						1615					1620			
Trp	His	Ala	Leu	Val	Ser	Phe	Leu	Asn	Val	Ala	His	Asn	Ala	Ile

1625		1630		1635
Leu Arg 1640	Ala Ser Leu Pro	Lys Asp Arg Ser Pro 1645	Glu Glu Tyr Gly 1650	
Ile Thr 1655	Val Ile Ser Gln	Pro Leu Asn Leu Thr 1660	Lys Glu Gln Leu 1665	
Ser Glu 1670	Ile Thr Val Leu	Thr Thr Ser Val Asp 1675	Ala Val Val Ala 1680	
Ile Cys 1685	Val Ile Phe Ser	Met Ser Phe Val Pro 1690	Ala Ser Phe Val 1695	
Leu Tyr 1700	Leu Ile Gln Glu	Arg Val Asn Lys Ser 1705	Lys His Leu Gln 1710	
Phe Ile 1715	Ser Gly Val Ser	Pro Thr Thr Tyr Trp 1720	Val Thr Asn Phe 1725	
Leu Trp 1730	Asp Ile Met Asn	Tyr Ser Val Ser Ala 1735	Gly Leu Val Val 1740	
Gly Ile 1745	Phe Ile Gly Phe	Gln Lys Lys Ala Tyr 1750	Thr Ser Pro Glu 1755	
Asn Leu 1760	Pro Ala Leu Val	Ala Leu Leu Leu Leu 1765	Tyr Gly Trp Ala 1770	
Val Ile 1775	Pro Met Met Tyr	Pro Ala Ser Phe Leu 1780	Phe Asp Val Pro 1785	
Ser Thr 1790	Ala Tyr Val Ala	Leu Ser Cys Ala Asn 1795	Leu Phe Ile Gly 1800	
Ile Asn 1805	Ser Ser Ala Ile	Thr Phe Ile Leu Glu 1810	Leu Phe Asp Asn 1815	
Asn Arg 1820	Thr Leu Leu Arg	Phe Asn Ala Val Leu 1825	Arg Lys Leu Leu 1830	
Ile Val 1835	Phe Pro His Phe	Cys Leu Gly Arg Gly 1840	Leu Ile Asp Leu 1845	
Ala Leu 1850	Ser Gln Ala Val	Thr Asp Val Tyr Ala 1855	Arg Phe Gly Glu 1860	

Glu	His	Ser	Ala	Asn	Pro	Phe	His	Trp	Asp	Leu	Ile	Gly	Lys	Asn
1865						1870					1875			
Leu	Phe	Ala	Met	Val	Val	Glu	Gly	Val	Val	Tyr	Phe	Leu	Leu	Thr
1880						1885					1890			
Leu	Leu	Val	Gln	Arg	His	Phe	Phe	Leu	Ser	Gln	Trp	Ile	Ala	Glu
1895						1900					1905			
Pro	Thr	Lys	Glu	Pro	Ile	Val	Asp	Glu	Asp	Asp	Asp	Val	Ala	Glu
1910						1915					1920			
Glu	Arg	Gln	Arg	Ile	Ile	Thr	Gly	Gly	Asn	Lys	Thr	Asp	Ile	Leu
1925						1930					1935			
Arg	Leu	His	Glu	Leu	Thr	Lys	Ile	Tyr	Leu	Gly	Thr	Ser	Ser	Pro
1940						1945					1950			
Ala	Val	Asp	Arg	Leu	Cys	Val	Gly	Val	Arg	Pro	Gly	Glu	Cys	Phe
1955						1960					1965			
Gly	Leu	Leu	Gly	Val	Asn	Gly	Ala	Gly	Lys	Thr	Thr	Thr	Phe	Lys
1970						1975					1980			
Met	Leu	Thr	Gly	Asp	Thr	Thr	Val	Thr	Ser	Gly	Asp	Ala	Thr	Val
1985						1990					1995			
Ala	Gly	Lys	Ser	Ile	Leu	Thr	Asn	Ile	Ser	Glu	Val	His	Gln	Asn
2000						2005					2010			
Met	Gly	Tyr	Cys	Pro	Gln	Phe	Asp	Ala	Ile	Asp	Glu	Leu	Leu	Thr
2015						2020					2025			
Gly	Arg	Glu	His	Leu	Tyr	Leu	Tyr	Ala	Arg	Leu	Arg	Gly	Val	Pro
2030						2035					2040			
Ala	Glu	Glu	Ile	Glu	Lys	Val	Ala	Asn	Trp	Ser	Ile	Lys	Ser	Leu
2045						2050					2055			
Gly	Leu	Thr	Val	Tyr	Ala	Asp	Cys	Leu	Ala	Gly	Thr	Tyr	Ser	Gly
2060						2065					2070			
Gly	Asn	Lys	Arg	Lys	Leu	Ser	Thr	Ala	Ile	Ala	Leu	Ile	Gly	Cys
2075						2080					2085			

Pro Pro Leu Val Leu Leu Asp Glu Pro Thr Thr Gly Met Asp Pro  
2090 2095 2100

Gln Ala Arg Arg Met Leu Trp Asn Val Ile Val Ser Ile Ile Arg  
2105 2110 2115

Lys Gly Arg Ala Val Val Leu Thr Ser His Ser Met Glu Glu Cys  
2120 2125 2130

Glu Ala Leu Cys Thr Arg Leu Ala Ile Met Val Lys Gly Ala Phe  
2135 2140 2145

Arg Cys Met Gly Thr Ile Gln His Leu Lys Ser Lys Phe Gly Asp  
2150 2155 2160

Gly Tyr Ile Val Thr Met Lys Ile Lys Ser Pro Lys Asp Asp Leu  
2165 2170 2175

Leu Pro Asp Leu Asn Pro Val Glu Gln Phe Phe Gln Gly Asn Phe  
2180 2185 2190

Pro Gly Ser Val Gln Arg Glu Arg His Tyr Asn Met Leu Gln Phe  
2195 2200 2205

Gln Val Ser Ser Ser Ser Leu Ala Arg Ile Phe Gln Leu Leu Leu  
2210 2215 2220

Ser His Lys Asp Ser Leu Leu Ile Glu Glu Tyr Ser Val Thr Gln  
2225 2230 2235

Thr Thr Leu Asp Gln Val Phe Val Asn Phe Ala Lys Gln Gln Thr  
2240 2245 2250

Glu Ser His Asp Leu Pro Leu His Pro Arg Ala Ala Gly Ala Ser  
2255 2260 2265

Arg Gln Ala Gln Asp  
2270

<210> 71  
<211> 560  
<212> PRT  
<213> Homo Sapiens

<400> 71

Met Val Pro His Ala Ile Leu Ala Arg Gly Arg Asp Val Cys Arg Arg

1		5		10		15	
Asn	Gly	Leu	Leu	Ile	Leu	Ser	Val
		20					25
Leu	Ser	Val	Ile	Val	Gly	Cys	Leu
					30		
Leu	Gly	Phe	Phe	Leu	Arg	Thr	Arg
		35				40	
Arg	Arg	Leu	Ser	Pro	Gln	Glu	Ile
					45		Ser
Tyr	Phe	Gln	Phe	Pro	Gly	Glu	Leu
	50				55		
Leu	Leu	Met	Arg	Met	Leu	Lys	Met
			60				Met
Ile	Leu	Pro	Leu	Val	Val	Ser	Ser
65				70			
Leu	Met	Ser	Gly	Leu	Ala	Ser	Leu
		75					80
Asp	Ala	Lys	Thr	Ser	Ser	Arg	Leu
			85				
Gly	Val	Leu	Thr	Val	Ala	Tyr	Tyr
	90					95	
Leu	Trp	Thr	Thr	Phe	Met	Ala	Val
		100					
Ile	Val	Gly	Ile	Phe	Met	Val	Ser
	105					110	
Ile	Ile	His	Pro	Gly	Ser	Ala	Ala
		115				120	
Gln	Lys	Glu	Thr	Thr	Glu	Gln	Ser
			125				
Gly	Lys	Pro	Ile	Met	Ser	Ser	Ala
	130					135	
Asp	Ala	Leu	Leu	Asp	Leu	Ile	Arg
		140					
Asn	Met	Phe	Pro	Ala	Asn	Leu	Val
145					150		
Glu	Ala	Thr	Phe	Lys	Gln	Tyr	Arg
		155					160
Thr	Lys	Thr	Thr	Pro	Val	Val	Lys
			165				
Ser	Pro	Lys	Val	Ala	Pro	Glu	Glu
			170			175	
Ala	Pro	Pro	Arg	Arg	Ile	Leu	Ile
			180				
Tyr	Gly	Val	Gln	Glu	Glu	Asn	Gly
	185				190		
Ser	His	Val	Gln	Asn	Phe	Ala	Leu
		195					200
Asp	Leu	Thr	Pro	Pro	Pro	Glu	Val
			205				
Val	Tyr	Lys	Ser	Glu	Pro	Gly	Thr
	210					215	
Ser	Asp	Gly	Met	Asn	Val	Leu	Gly
		220					
Ile	Val	Phe	Phe	Ser	Ala	Thr	Met
					230		
Gly	Ile	Met	Leu	Gly	Arg	Met	Gly
		235					240
Asp	Ser	Gly	Ala	Pro	Leu	Val	Ser
			245				
Phe	Cys	Gln	Cys	Leu	Asn	Glu	Ser
	250					255	

Val Met Lys Ile Val Ala Val Ala Val Trp Tyr Phe Pro Phe Gly Ile  
260 265 270

Val Phe Leu Ile Ala Gly Lys Ile Leu Glu Met Asp Asp Pro Arg Ala  
275 280 285

Val Gly Lys Lys Leu Gly Phe Tyr Ser Val Thr Val Val Cys Gly Leu  
290 295 300

Val Leu His Gly Leu Phe Ile Leu Pro Leu Leu Tyr Phe Phe Ile Thr  
305 310 315 320

Lys Lys Asn Pro Ile Val Phe Ile Arg Gly Ile Leu Gln Ala Leu Leu  
325 330 335

Ile Ala Leu Ala Thr Ser Ser Ser Ser Ala Thr Leu Pro Ile Thr Phe  
340 345 350

Lys Cys Leu Leu Glu Asn Asn His Ile Asp Arg Arg Ile Ala Arg Phe  
355 360 365

Val Leu Pro Val Gly Ala Thr Ile Asn Met Asp Gly Thr Ala Leu Tyr  
370 375 380

Glu Ala Val Ala Ala Ile Phe Ile Ala Gln Val Asn Asn Tyr Glu Leu  
385 390 395 400

Asp Phe Gly Gln Ile Ile Thr Ile Ser Ile Thr Ala Thr Ala Ala Ser  
405 410 415

Ile Gly Ala Ala Gly Ile Pro Gln Ala Gly Leu Val Thr Met Val Ile  
420 425 430

Val Leu Thr Ser Val Gly Leu Pro Thr Asp Asp Ile Thr Leu Ile Ile  
435 440 445

Ala Val Asp Trp Ala Leu Asp Arg Phe Arg Thr Met Ile Asn Val Leu  
450 455 460

Gly Asp Ala Leu Ala Ala Gly Ile Met Ala His Ile Cys Arg Lys Asp  
465 470 475 480

Phe Ala Arg Asp Thr Gly Thr Glu Lys Leu Leu Pro Cys Glu Thr Lys  
485 490 495

Pro Val Ser Leu Gln Glu Ile Val Ala Ala Gln Gln Asn Gly Cys Val  
500 505 510

Lys Ser Val Ala Glu Ala Ser Glu Leu Thr Leu Gly Pro Thr Cys Pro  
515 520 525

His His Val Pro Val Gln Val Glu Arg Asp Glu Glu Leu Pro Ala Ala  
530 535 540

Ser Leu Asn His Cys Thr Ile Gln Ile Ser Glu Leu Glu Thr Asn Val  
545 550 555 560

<210> 72  
<211> 840  
<212> PRT  
<213> Homo Sapiens

<400> 72

Met Val Thr Val Gly Asn Tyr Cys Glu Ala Glu Gly Pro Val Gly Pro  
1 5 10 15

Ala Trp Met Gln Asp Gly Leu Ser Pro Cys Phe Phe Phe Thr Leu Val  
20 25 30

Pro Ser Thr Arg Met Ala Leu Gly Thr Leu Ala Leu Val Leu Ala Leu  
35 40 45

Pro Cys Arg Arg Arg Glu Arg Pro Ala Gly Ala Asp Ser Leu Ser Trp  
50 55 60

Gly Ala Gly Pro Arg Ile Ser Pro Tyr Val Leu Gln Leu Leu Leu Ala  
65 70 75 80

Thr Leu Gln Ala Ala Leu Pro Leu Ala Gly Leu Ala Gly Arg Val Gly  
85 90 95

Thr Ala Arg Gly Ala Pro Leu Pro Ser Tyr Leu Leu Leu Ala Ser Val  
100 105 110

Leu Glu Ser Leu Ala Gly Ala Cys Gly Leu Trp Leu Leu Val Val Glu  
115 120 125

Arg Ser Gln Ala Arg Gln Arg Leu Ala Met Gly Ile Trp Ile Lys Phe  
130 135 140

Arg His Ser Pro Gly Leu Leu Leu Leu Trp Thr Val Ala Phe Ala Ala



145		150		155		160
Glu Asn Leu Ala Leu Val Ser Trp Asn Ser Pro Gln Trp Trp Trp Ala	165		170		175	
Arg Ala Asp Leu Gly Gln Gln Val Gln Phe Ser Leu Trp Val Leu Arg	180		185		190	
Tyr Val Val Ser Gly Gly Leu Phe Val Leu Gly Leu Trp Ala Pro Gly	195		200		205	
Leu Arg Pro Gln Ser Tyr Thr Leu Gln Val His Glu Glu Asp Gln Asp	210		215		220	
Val Glu Arg Ser Gln Val Arg Ser Ala Ala Gln Gln Ser Thr Trp Arg	225		230		235	240
Asp Phe Gly Arg Lys Leu Arg Leu Leu Ser Gly Tyr Leu Trp Pro Arg	245		250		255	
Gly Ser Pro Ala Leu Gln Leu Val Val Leu Ile Cys Leu Gly Leu Met	260		265		270	
Gly Leu Glu Arg Ala Leu Asn Val Leu Val Pro Ile Phe Tyr Arg Asn	275		280		285	
Ile Val Asn Leu Leu Thr Glu Lys Ala Pro Trp Asn Ser Leu Ala Trp	290		295		300	
Thr Val Thr Ser Tyr Val Phe Leu Lys Phe Leu Gln Gly Gly Gly Thr	305		310		315	320
Gly Ser Thr Gly Phe Val Ser Asn Leu Arg Thr Phe Leu Trp Ile Arg	325		330		335	
Val Gln Gln Phe Thr Ser Arg Arg Val Glu Leu Leu Ile Phe Ser His	340		345		350	
Leu His Glu Leu Ser Leu Arg Trp His Leu Gly Arg Arg Thr Gly Glu	355		360		365	
Val Leu Arg Ile Ala Asp Arg Gly Thr Ser Ser Val Thr Gly Leu Leu	370		375		380	
Ser Tyr Leu Val Phe Asn Val Ile Pro Thr Leu Ala Asp Ile Ile Ile	385		390		395	400

Gly Ile Ile Tyr Phe Ser Met Phe Phe Asn Ala Trp Phe Gly Leu Ile  
 405 410 415

Val Phe Leu Cys Met Ser Leu Tyr Leu Thr Leu Thr Ile Val Val Thr  
 420 425 430

Glu Trp Arg Thr Lys Phe Arg Arg Ala Met Asn Thr Gln Glu Asn Ala  
 435 440 445

Thr Arg Ala Arg Ala Val Asp Ser Leu Leu Asn Phe Glu Thr Val Lys  
 450 455 460

Tyr Tyr Asn Ala Glu Ser Tyr Glu Val Glu Arg Tyr Arg Glu Ala Ile  
 465 470 475 480

Ile Lys Tyr Gln Gly Leu Glu Trp Lys Ser Ser Ala Ser Leu Val Leu  
 485 490 495

Leu Asn Gln Thr Gln Asn Leu Val Ile Gly Leu Gly Leu Leu Ala Gly  
 500 505 510

Ser Leu Leu Cys Ala Tyr Phe Val Thr Glu Gln Lys Leu Gln Val Gly  
 515 520 525

Asp Tyr Val Leu Phe Gly Thr Tyr Ile Ile Gln Leu Tyr Met Pro Leu  
 530 535 540

Asn Trp Phe Gly Thr Tyr Tyr Arg Met Ile Gln Thr Asn Phe Ile Asp  
 545 550 555 560

Met Glu Asn Met Phe Asp Leu Leu Lys Glu Glu Thr Glu Val Lys Asp  
 565 570 575

Leu Pro Gly Ala Gly Pro Leu Arg Phe Gln Lys Gly Arg Ile Glu Phe  
 580 585 590

Glu Asn Val His Phe Ser Tyr Ala Asp Gly Arg Glu Thr Leu Gln Asp  
 595 600 605

Val Ser Phe Thr Val Met Pro Gly Gln Thr Leu Ala Leu Val Gly Pro  
 610 615 620

Ser Gly Ala Gly Lys Ser Thr Ile Leu Arg Leu Leu Phe Arg Phe Tyr  
 625 630 635 640

Asp Ile Ser Ser Gly Cys Ile Arg Ile Asp Gly Gln Asp Ile Ser Gln  
645 650 655

Val Thr Gln Ala Ser Leu Arg Ser His Ile Gly Val Val Pro Gln Asp  
660 665 670

Thr Val Leu Phe Asn Asp Thr Ile Ala Asp Asn Ile Arg Tyr Gly Arg  
675 680 685

Val Thr Ala Gly Asn Asp Glu Val Glu Ala Ala Ala Gln Ala Ala Gly  
690 695 700

Ile His Asp Ala Ile Met Ala Phe Pro Glu Gly Tyr Arg Thr Gln Val  
705 710 715 720

Gly Glu Arg Gly Leu Lys Leu Ser Gly Gly Glu Lys Gln Arg Val Ala  
725 730 735

Ile Ala Arg Thr Ile Leu Lys Ala Pro Gly Ile Ile Leu Leu Asp Glu  
740 745 750

Ala Thr Ser Ala Leu Asp Thr Ser Asn Glu Arg Ala Ile Gln Ala Ser  
755 760 765

Leu Ala Lys Val Cys Ala Asn Arg Thr Thr Ile Val Val Ala His Arg  
770 775 780

Leu Ser Thr Val Val Asn Ala Asp Gln Ile Leu Val Ile Lys Asp Gly  
785 790 795 800

Cys Ile Val Glu Arg Gly Arg His Glu Ala Leu Leu Ser Arg Gly Gly  
805 810 815

Val Tyr Ala Asp Met Trp Gln Leu Gln Gln Gly Gln Glu Glu Thr Ser  
820 825 830

Glu Asp Thr Lys Pro Gln Thr Met  
835 840

<210> 73  
<211> 332  
<212> PRT  
<213> Homo Sapiens

<400> 73

Met Leu Leu Glu Thr Gln Asp Ala Leu Tyr Val Ala Leu Glu Leu Val

1	5	10	15
Ile Ala Ala Leu Ser Val Ala Gly Asn Val Leu Val Cys Ala Ala Val	20	25	30
Gly Thr Ala Asn Thr Leu Gln Thr Pro Thr Asn Tyr Phe Leu Val Ser	35	40	45
Leu Ala Ala Ala Asp Val Ala Val Gly Leu Phe Ala Ile Pro Phe Ala	50	55	60
Ile Thr Ile Ser Leu Gly Phe Cys Thr Asp Phe Tyr Gly Cys Leu Phe	65	70	75
Leu Ala Cys Phe Val Leu Val Leu Thr Gln Ser Ser Ile Phe Ser Leu	85	90	95
Leu Ala Val Ala Val Asp Arg Tyr Leu Ala Ile Cys Val Pro Leu Arg	100	105	110
Tyr Lys Ser Leu Val Thr Gly Thr Arg Ala Arg Gly Val Ile Ala Val	115	120	125
Leu Trp Val Leu Ala Phe Gly Ile Gly Leu Thr Pro Phe Leu Gly Trp	130	135	140
Asn Ser Lys Asp Ser Ala Thr Asn Asn Cys Thr Glu Pro Trp Asp Gly	145	150	155
Thr Thr Asn Glu Ser Cys Cys Leu Val Lys Cys Leu Phe Glu Asn Val	165	170	175
Val Pro Met Ser Tyr Met Val Tyr Phe Asn Phe Phe Gly Cys Val Leu	180	185	190
Pro Pro Leu Leu Ile Met Leu Val Ile Tyr Ile Lys Ile Phe Leu Val	195	200	205
Ala Cys Arg Gln Leu Gln Arg Thr Glu Leu Met Asp His Ser Arg Thr	210	215	220
Thr Leu Gln Arg Glu Ile His Ala Ala Lys Ser Leu Ala Met Ile Val	225	230	235
Gly Ile Phe Ala Leu Cys Trp Leu Pro Val His Ala Val Asn Cys Val	245	250	255

Thr Leu Phe Gln Pro Ala Gln Gly Lys Asn Lys Pro Lys Trp Ala Met  
 260 265 270

Asn Met Ala Ile Leu Leu Ser His Ala Asn Ser Val Val Asn Pro Ile  
 275 280 285

Val Tyr Ala Tyr Arg Asn Arg Asp Phe Arg Tyr Thr Phe His Lys Ile  
 290 295 300

Ile Ser Arg Tyr Leu Leu Cys Gln Ala Asp Val Lys Ser Gly Asn Gly  
 305 310 315 320

Gln Ala Gly Val Gln Pro Ala Leu Gly Val Gly Leu  
 325 330

<210> 74  
 <211> 180  
 <212> PRT  
 <213> Homo Sapiens

<400> 74

Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly Thr  
 1 5 10 15

Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala Ala Met  
 20 25 30

Ala Glu Thr Leu Gln His Val Pro Ser Asp His Thr Asn Glu Thr Ser  
 35 40 45

Asn Ser Thr Val Lys Pro Pro Thr Ser Val Ala Ser Asp Ser Ser Asn  
 50 55 60

Thr Thr Val Thr Thr Met Lys Pro Thr Ala Ala Ser Asn Thr Thr Thr  
 65 70 75 80

Pro Gly Met Val Ser Thr Asn Met Thr Ser Thr Thr Leu Lys Ser Thr  
 85 90 95

Pro Lys Thr Thr Ser Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser  
 100 105 110

Thr Met Thr Val Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser  
 115 120 125

Val Thr Ile Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys  
 130 135 140

Phe Asp Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val  
 145 150 155 160

Leu Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly  
 165 170 175

Ile Arg Tyr Arg  
 180

<210> 75  
 <211> 240  
 <212> PRT  
 <213> Homo Sapiens

<400> 75

Met Ala Gln His Gly Ala Met Gly Ala Phe Arg Ala Leu Cys Gly Leu  
 1 5 10 15

Ala Leu Leu Cys Ala Leu Ser Leu Gly Gln Arg Pro Thr Gly Gly Pro  
 20 25 30

Gly Cys Gly Pro Gly Arg Leu Leu Leu Gly Thr Gly Thr Asp Ala Arg  
 35 40 45

Cys Cys Arg Val His Thr Thr Arg Cys Cys Arg Asp Tyr Pro Gly Glu  
 50 55 60

Glu Cys Cys Ser Glu Trp Asp Cys Met Cys Val Gln Pro Glu Phe His  
 65 70 75 80

Cys Gly Asp Pro Cys Cys Thr Thr Cys Arg His His Pro Cys Pro Pro  
 85 90 95

Gly Gln Gly Val Gln Ser Gln Gly Lys Phe Ser Phe Gly Phe Gln Cys  
 100 105 110

Ile Asp Cys Ala Ser Gly Thr Phe Ser Gly Gly His Glu Gly His Cys  
 115 120 125

Lys Pro Trp Thr Asp Cys Thr Gln Phe Gly Phe Leu Thr Val Phe Pro  
 130 135 140

Gly Asn Lys Thr His Asn Ala Val Cys Val Pro Gly Ser Pro Pro Ala  
 145 150 155 160

Glu Pro Leu Gly Trp Leu Thr Val Val Leu Leu Ala Val Ala Ala Cys  
165 170 175

Val Leu Leu Leu Thr Ser Ala Gln Leu Gly Leu His Ile Trp Gln Leu  
180 185 190

Arg Ser Gln Cys Met Trp Pro Arg Glu Thr Gln Leu Leu Leu Glu Val  
195 200 205

Pro Pro Ser Thr Glu Asp Ala Arg Ser Cys Gln Phe Pro Glu Glu Glu  
210 215 220

Arg Gly Glu Arg Ser Ala Glu Glu Lys Gly Arg Leu Gly Asp Leu Trp  
225 230 235 240

<210> 76  
<211> 514  
<212> PRT  
<213> Homo Sapiens

<400> 76

Met Gly Cys Asp Gly Arg Val Ser Gly Leu Leu Arg Arg Asn Leu Gln  
1 5 10 15

Pro Thr Leu Thr Tyr Trp Ser Val Phe Phe Ser Phe Gly Leu Cys Ile  
20 25 30

Ala Phe Leu Gly Pro Thr Leu Leu Asp Leu Arg Cys Gln Thr His Ser  
35 40 45

Ser Leu Pro Gln Ile Ser Trp Val Phe Phe Ser Gln Gln Leu Cys Leu  
50 55 60

Leu Leu Gly Ser Ala Leu Gly Gly Val Phe Lys Arg Thr Leu Ala Gln  
65 70 75 80

Ser Leu Trp Ala Leu Phe Thr Ser Ser Leu Ala Ile Ser Leu Val Phe  
85 90 95

Ala Val Ile Pro Phe Cys Arg Asp Val Lys Val Leu Ala Ser Val Met  
100 105 110

Ala Leu Ala Gly Leu Ala Met Gly Cys Ile Asp Thr Val Ala Asn Met  
115 120 125

Gln Leu Val Arg Met Tyr Gln Lys Asp Ser Ala Val Phe Leu Gln Val  
 130 135 140

Leu His Phe Phe Val Gly Phe Gly Ala Leu Leu Ser Pro Leu Ile Ala  
 145 150 155 160

Asp Pro Phe Leu Ser Glu Ala Asn Cys Leu Pro Ala Asn Ser Thr Ala  
 165 170 175

Asn Thr Thr Ser Arg Gly His Leu Phe His Val Ser Arg Val Leu Gly  
 180 185 190

Gln His His Val Asp Ala Lys Pro Trp Ser Asn Gln Thr Phe Pro Gly  
 195 200 205

Leu Thr Pro Lys Asp Gly Ala Gly Thr Arg Val Ser Tyr Ala Phe Trp  
 210 215 220

Ile Met Ala Leu Ile Asp Leu Pro Val Pro Met Ala Val Leu Met Leu  
 225 230 235 240

Leu Ser Lys Glu Arg Leu Leu Thr Cys Cys Pro Gln Arg Arg Pro Leu  
 245 250 255

Leu Leu Ser Ala Asp Glu Leu Ala Leu Glu Thr Gln Pro Pro Glu Lys  
 260 265 270

Glu Asp Ala Ser Ser Leu Pro Pro Lys Phe Gln Ser His Leu Gly His  
 275 280 285

Glu Asp Leu Phe Ser Cys Cys Gln Arg Lys Asn Leu Arg Gly Ala Pro  
 290 295 300

Tyr Ser Phe Phe Ala Ile His Ile Thr Gly Ala Leu Val Leu Phe Met  
 305 310 315 320

Thr Asp Gly Leu Thr Gly Ala Tyr Ser Ala Phe Val Tyr Ser Tyr Ala  
 325 330 335

Val Glu Lys Pro Leu Ser Val Gly His Lys Val Ala Gly Tyr Leu Pro  
 340 345 350

Ser Leu Phe Trp Gly Phe Ile Thr Leu Gly Arg Leu Leu Ser Ile Pro  
 355 360 365

Ile Ser Ser Arg Met Lys Pro Ala Thr Met Val Phe Ile Asn Val Val



370                      375                      380  
 Gly Val Val Val Thr Phe Leu Val Leu Leu Ile Phe Ser Tyr Asn Val  
 385                      390                      395                      400  
 Val Phe Leu Phe Val Gly Thr Ala Ser Leu Gly Leu Phe Leu Ser Ser  
                     405                      410                      415  
 Thr Phe Pro Ser Met Leu Ala Tyr Thr Glu Asp Ser Leu Gln Tyr Lys  
                     420                      425                      430  
 Gly Cys Ala Thr Thr Val Leu Val Thr Gly Ala Gly Val Gly Glu Met  
                     435                      440                      445  
 Val Leu Gln Met Leu Val Gly Ser Ile Phe Gln Ala Gln Gly Ser Tyr  
                     450                      455                      460  
 Ser Phe Leu Val Cys Gly Val Ile Phe Gly Cys Leu Ala Phe Thr Phe  
 465                      470                      475                      480  
 Tyr Ile Leu Leu Leu Phe Phe His Arg Met His Pro Gly Leu Pro Ser  
                     485                      490                      495  
 Val Pro Thr Gln Asp Arg Ser Ile Gly Met Glu Asn Ser Glu Cys Tyr  
                     500                      505                      510

Gln Arg

<210> 77  
 <211> 1181  
 <212> PRT  
 <213> Homo Sapiens

<400> 77

Met Gly Pro Glu Arg Thr Gly Ala Ala Pro Leu Pro Leu Leu Leu Val  
 1                      5                      10                      15  
 Leu Ala Leu Ser Gln Gly Ile Leu Asn Cys Cys Leu Ala Tyr Asn Val  
                     20                      25                      30  
 Gly Leu Pro Glu Ala Lys Ile Phe Ser Gly Pro Ser Ser Glu Gln Phe  
                     35                      40                      45  
 Gly Tyr Ala Val Gln Gln Phe Ile Asn Pro Lys Gly Asn Trp Leu Leu  
                     50                      55                      60

Val Gly Ser Pro Trp Ser Gly Phe Pro Glu Asn Arg Met Gly Asp Val  
 65 70 75 80

Tyr Lys Cys Pro Val Asp Leu Ser Thr Ala Thr Cys Glu Lys Leu Asn  
 85 90 95

Leu Gln Thr Ser Thr Ser Ile Pro Asn Val Thr Glu Met Lys Thr Asn  
 100 105 110

Met Ser Leu Gly Leu Ile Leu Thr Arg Asn Met Gly Thr Gly Gly Phe  
 115 120 125

Leu Thr Cys Gly Pro Leu Trp Ala Gln Gln Cys Gly Asn Gln Tyr Tyr  
 130 135 140

Thr Thr Gly Val Cys Ser Asp Ile Ser Pro Asp Phe Gln Leu Ser Ala  
 145 150 155 160

Ser Phe Ser Pro Ala Thr Gln Pro Cys Pro Ser Leu Ile Asp Val Val  
 165 170 175

Val Val Cys Asp Glu Ser Asn Ser Ile Tyr Pro Trp Asp Ala Val Lys  
 180 185 190

Asn Phe Leu Glu Lys Phe Val Gln Gly Leu Asp Ile Gly Pro Thr Lys  
 195 200 205

Thr Gln Val Gly Leu Ile Gln Tyr Ala Asn Asn Pro Arg Val Val Phe  
 210 215 220

Asn Leu Asn Thr Tyr Lys Thr Lys Glu Glu Met Ile Val Ala Thr Ser  
 225 230 235 240

Gln Thr Ser Gln Tyr Gly Gly Asp Leu Thr Asn Thr Phe Gly Ala Ile  
 245 250 255

Gln Tyr Ala Arg Lys Tyr Ala Tyr Ser Ala Ala Ser Gly Gly Arg Arg  
 260 265 270

Ser Ala Thr Lys Val Met Val Val Val Thr Asp Gly Glu Ser His Asp  
 275 280 285

Gly Ser Met Leu Lys Ala Val Ile Asp Gln Cys Asn His Asp Asn Ile  
 290 295 300

Leu Arg Phe Gly Ile Ala Val Leu Gly Tyr Leu Asn Arg Asn Ala Leu  
 305 310 315 320

Asp Thr Lys Asn Leu Ile Lys Glu Ile Lys Ala Ile Ala Ser Ile Pro  
 325 330 335

Thr Glu Arg Tyr Phe Phe Asn Val Ser Asp Glu Ala Ala Leu Leu Glu  
 340 345 350

Lys Ala Gly Thr Leu Gly Glu Gln Ile Phe Ser Ile Glu Gly Thr Val  
 355 360 365

Gln Gly Gly Asp Asn Phe Gln Met Glu Met Ser Gln Val Gly Phe Ser  
 370 375 380

Ala Asp Tyr Ser Ser Gln Asn Asp Ile Leu Met Leu Gly Ala Val Gly  
 385 390 395 400

Ala Phe Gly Trp Ser Gly Thr Ile Val Gln Lys Thr Ser His Gly His  
 405 410 415

Leu Ile Phe Pro Lys Gln Ala Phe Asp Gln Ile Leu Gln Asp Arg Asn  
 420 425 430

His Ser Ser Tyr Leu Gly Tyr Ser Val Ala Ala Ile Ser Thr Gly Glu  
 435 440 445

Ser Thr His Phe Val Ala Gly Ala Pro Arg Ala Asn Tyr Thr Gly Gln  
 450 455 460

Ile Val Leu Tyr Ser Val Asn Glu Asn Gly Asn Ile Thr Val Ile Gln  
 465 470 475 480

Ala His Arg Gly Asp Gln Ile Gly Ser Tyr Phe Gly Ser Val Leu Cys  
 485 490 495

Ser Val Asp Val Asp Lys Asp Thr Ile Thr Asp Val Leu Leu Val Gly  
 500 505 510

Ala Pro Met Tyr Met Ser Asp Leu Lys Lys Glu Glu Gly Arg Val Tyr  
 515 520 525

Leu Phe Thr Ile Lys Lys Gly Ile Leu Gly Gln His Gln Phe Leu Glu  
 530 535 540

Gly Pro Glu Gly Ile Glu Asn Thr Arg Phe Gly Ser Ala Ile Ala Ala

545		550		555		560
Leu Ser Asp Ile	Asn Met Asp Gly Phe	Asn Asp Val Ile Val Gly Ser				
	565	570				575
Pro Leu Glu Asn Gln Asn Ser Gly Ala Val Tyr Ile Tyr Asn Gly His						
	580	585				590
Gln Gly Thr Ile Arg Thr Lys Tyr Ser Gln Lys Ile Leu Gly Ser Asp						
	595	600				605
Gly Ala Phe Arg Ser His Leu Gln Tyr Phe Gly Arg Ser Leu Asp Gly						
	610	615				620
Tyr Gly Asp Leu Asn Gly Asp Ser Ile Thr Asp Val Ser Ile Gly Ala						
	625	630				640
Phe Gly Gln Val Val Gln Leu Trp Ser Gln Ser Ile Ala Asp Val Ala						
	645	650				655
Ile Glu Ala Ser Phe Thr Pro Glu Lys Ile Thr Leu Val Asn Lys Asn						
	660	665				670
Ala Gln Ile Ile Leu Lys Leu Cys Phe Ser Ala Lys Phe Arg Pro Thr						
	675	680				685
Lys Gln Asn Asn Gln Val Ala Ile Val Tyr Asn Ile Thr Leu Asp Ala						
	690	695				700
Asp Gly Phe Ser Ser Arg Val Thr Ser Arg Gly Leu Phe Lys Glu Asn						
	705	710				720
Asn Glu Arg Cys Leu Gln Lys Asn Met Val Val Asn Gln Ala Gln Ser						
	725	730				735
Cys Pro Glu His Ile Ile Tyr Ile Gln Glu Pro Ser Asp Val Val Asn						
	740	745				750
Ser Leu Asp Leu Arg Val Asp Ile Ser Leu Glu Asn Pro Gly Thr Ser						
	755	760				765
Pro Ala Leu Glu Ala Tyr Ser Glu Thr Ala Lys Val Phe Ser Ile Pro						
	770	775				780
Phe His Lys Asp Cys Gly Glu Asp Gly Leu Cys Ile Ser Asp Leu Val						
	785	790				800

Leu Asp Val Arg Gln Ile Pro Ala Ala Gln Glu Gln Pro Phe Ile Val  
 805 810 815

Ser Asn Gln Asn Lys Arg Leu Thr Phe Ser Val Thr Leu Lys Asn Lys  
 820 825 830

Arg Glu Ser Ala Tyr Asn Thr Gly Ile Val Val Asp Phe Ser Glu Asn  
 835 840 845

Leu Phe Phe Ala Ser Phe Ser Leu Pro Val Asp Gly Thr Glu Val Thr  
 850 855 860

Cys Gln Val Ala Ala Ser Gln Lys Ser Val Ala Cys Asp Val Gly Tyr  
 865 870 875 880

Pro Ala Leu Lys Arg Glu Gln Gln Val Thr Phe Thr Ile Asn Phe Asp  
 885 890 895

Phe Asn Leu Gln Asn Leu Gln Asn Gln Ala Ser Leu Ser Phe Gln Ala  
 900 905 910

Leu Ser Glu Ser Gln Glu Glu Asn Lys Ala Asp Asn Leu Val Asn Leu  
 915 920 925

Lys Ile Pro Leu Leu Tyr Asp Ala Glu Ile His Leu Thr Arg Ser Thr  
 930 935 940

Asn Ile Asn Phe Tyr Glu Ile Ser Ser Asp Gly Asn Val Pro Ser Ile  
 945 950 955 960

Val His Ser Phe Glu Asp Val Gly Pro Lys Phe Ile Phe Ser Leu Lys  
 965 970 975

Val Thr Thr Gly Ser Val Pro Val Ser Met Ala Thr Val Ile Ile His  
 980 985 990

Ile Pro Gln Tyr Thr Lys Glu Lys Asn Pro Leu Met Tyr Leu Thr Gly  
 995 1000 1005

Val Gln Thr Asp Lys Ala Gly Asp Ile Ser Cys Asn Ala Asp Ile  
 1010 1015 1020

Asn Pro Leu Lys Ile Gly Gln Thr Ser Ser Ser Val Ser Phe Lys  
 1025 1030 1035

Ser Glu Asn Phe Arg His Thr Lys Glu Leu Asn Cys Arg Thr Ala  
 1040 1045 1050

Ser Cys Ser Asn Val Thr Cys Trp Leu Lys Asp Val His Met Lys  
 1055 1060 1065

Gly Glu Tyr Phe Val Asn Val Thr Thr Arg Ile Trp Asn Gly Thr  
 1070 1075 1080

Phe Ala Ser Ser Thr Phe Gln Thr Val Gln Leu Thr Ala Ala Ala  
 1085 1090 1095

Glu Ile Asn Thr Tyr Asn Pro Glu Ile Tyr Val Ile Glu Asp Asn  
 1100 1105 1110

Thr Val Thr Ile Pro Leu Met Ile Met Lys Pro Asp Glu Lys Ala  
 1115 1120 1125

Glu Val Pro Thr Gly Val Ile Ile Gly Ser Ile Ile Ala Gly Ile  
 1130 1135 1140

Leu Leu Leu Leu Ala Leu Val Ala Ile Leu Trp Lys Leu Gly Phe  
 1145 1150 1155

Phe Lys Arg Lys Tyr Glu Lys Met Thr Lys Asn Pro Asp Glu Ile  
 1160 1165 1170

Asp Glu Thr Thr Glu Leu Ser Ser  
 1175 1180

<210> 78  
 <211> 332  
 <212> PRT  
 <213> Homo Sapiens

<400> 78

Met Tyr Arg Pro Arg Ala Arg Ala Ala Pro Glu Gly Arg Val Arg Gly  
 1 5 10 15

Cys Ala Val Pro Ser Thr Val Leu Leu Leu Leu Ala Tyr Leu Ala Tyr  
 20 25 30

Leu Ala Leu Gly Thr Gly Val Phe Trp Thr Leu Glu Gly Arg Ala Ala  
 35 40 45

Gln Asp Ser Ser Arg Ser Phe Gln Arg Asp Lys Trp Glu Leu Leu Gln

50		55		60
Asn Phe Thr Cys Leu Asp Arg Pro Ala Leu Asp Ser Leu Ile Arg Asp				
65		70		75
Val Val Gln Ala Tyr Lys Asn Gly Ala Ser Leu Leu Ser Asn Thr Thr				
	85		90	95
Ser Met Gly Arg Trp Glu Leu Val Gly Ser Phe Phe Phe Ser Val Ser				
	100		105	110
Thr Ile Thr Thr Ile Gly Tyr Gly Asn Leu Ser Pro Asn Thr Met Ala				
	115		120	125
Ala Arg Leu Phe Cys Ile Phe Phe Ala Leu Val Gly Ile Pro Leu Asn				
	130		135	140
Leu Val Val Leu Asn Arg Leu Gly His Leu Met Gln Gln Gly Val Asn				
145		150		155
His Trp Ala Ser Arg Leu Gly Gly Thr Trp Gln Asp Pro Asp Lys Ala				
	165		170	175
Arg Trp Leu Ala Gly Ser Gly Ala Leu Leu Ser Gly Leu Leu Leu Phe				
	180		185	190
Leu Leu Leu Pro Pro Leu Leu Phe Ser His Met Glu Gly Trp Ser Tyr				
	195		200	205
Thr Glu Gly Phe Tyr Phe Ala Phe Ile Thr Leu Ser Thr Val Gly Phe				
	210		215	220
Gly Asp Tyr Val Ile Gly Met Asn Pro Ser Gln Arg Tyr Pro Leu Trp				
225		230		235
Tyr Lys Asn Met Val Ser Leu Trp Ile Leu Phe Gly Met Ala Trp Leu				
	245		250	255
Ala Leu Ile Ile Lys Leu Ile Leu Ser Gln Leu Glu Thr Pro Gly Arg				
	260		265	270
Val Cys Ser Cys Cys His His Ser Ser Lys Glu Asp Phe Lys Ser Gln				
	275		280	285
Ser Trp Arg Gln Gly Pro Asp Arg Glu Pro Glu Ser His Ser Pro Gln				
	290		295	300

Gln Gly Cys Tyr Pro Glu Gly Pro Met Gly Ile Ile Gln His Leu Glu  
 305 310 315 320

Pro Ser Ala His Ala Ala Gly Cys Gly Lys Asp Ser  
 325 330

<210> 79  
 <211> 328  
 <212> PRT  
 <213> Homo Sapiens

<400> 79

Met Glu Trp Asp Asn Gly Thr Gly Gln Ala Leu Gly Leu Pro Pro Thr  
 1 5 10 15

Thr Cys Val Tyr Arg Glu Asn Phe Lys Gln Leu Leu Leu Pro Pro Val  
 20 25 30

Tyr Ser Ala Val Leu Ala Ala Gly Leu Pro Leu Asn Ile Cys Val Ile  
 35 40 45

Thr Gln Ile Cys Thr Ser Arg Arg Ala Leu Thr Arg Thr Ala Val Tyr  
 50 55 60

Thr Leu Asn Leu Ala Leu Ala Asp Leu Leu Tyr Ala Cys Ser Leu Pro  
 65 70 75 80

Leu Leu Ile Tyr Asn Tyr Ala Gln Gly Asp His Trp Pro Phe Gly Asp  
 85 90 95

Phe Ala Cys Arg Leu Val Arg Phe Leu Phe Tyr Ala Asn Leu His Gly  
 100 105 110

Ser Ile Leu Phe Leu Thr Cys Ile Ser Phe Gln Arg Tyr Leu Gly Ile  
 115 120 125

Cys His Pro Leu Ala Pro Trp His Lys Arg Gly Gly Arg Arg Ala Ala  
 130 135 140

Trp Leu Val Cys Val Ala Val Trp Leu Ala Val Thr Thr Gln Cys Leu  
 145 150 155 160

Pro Thr Ala Ile Phe Ala Ala Thr Gly Ile Gln Arg Asn Arg Thr Val  
 165 170 175



Cys Tyr Asp Leu Ser Pro Pro Ala Leu Ala Thr His Tyr Met Pro Tyr  
180 185 190

Gly Met Ala Leu Thr Val Ile Gly Phe Leu Leu Pro Phe Ala Ala Leu  
195 200 205

Leu Ala Cys Tyr Cys Leu Leu Ala Cys Arg Leu Cys Arg Gln Asp Gly  
210 215 220

Pro Ala Glu Pro Val Ala Gln Glu Arg Arg Gly Lys Ala Ala Arg Met  
225 230 235 240

Ala Val Val Val Ala Ala Ala Phe Ala Ile Ser Phe Leu Pro Phe His  
245 250 255

Ile Thr Lys Thr Ala Tyr Leu Ala Val Arg Ser Thr Pro Gly Val Pro  
260 265 270

Cys Thr Val Leu Glu Ala Phe Ala Ala Ala Tyr Lys Gly Thr Arg Pro  
275 280 285

Phe Ala Ser Ala Asn Ser Val Leu Asp Pro Ile Leu Phe Tyr Phe Thr  
290 295 300

Gln Lys Lys Phe Arg Arg Arg Pro His Glu Leu Leu Gln Lys Leu Thr  
305 310 315 320

Ala Lys Trp Gln Arg Gln Gly Arg  
325

<210> 80

<211> 581

<212> PRT

<213> Homo Sapiens

<400> 80

Met Gln Arg Pro Gly Pro Arg Leu Trp Leu Val Leu Gln Val Met Gly  
1 5 10 15

Ser Cys Ala Ala Ile Ser Ser Met Asp Met Glu Arg Pro Gly Asp Gly  
20 25 30

Lys Cys Gln Pro Ile Glu Ile Pro Met Cys Lys Asp Ile Gly Tyr Asn  
35 40 45

Met Thr Arg Met Pro Asn Leu Met Gly His Glu Asn Gln Arg Glu Ala  
50 55 60

Ala Ile Gln Leu His Glu Phe Ala Pro Leu Val Glu Tyr Gly Cys His  
 65 70 75 80

Gly His Leu Arg Phe Phe Leu Cys Ser Leu Tyr Ala Pro Met Cys Thr  
 85 90 95

Glu Gln Val Ser Thr Pro Ile Pro Ala Cys Arg Val Met Cys Glu Gln  
 100 105 110

Ala Arg Leu Lys Cys Ser Pro Ile Met Glu Gln Phe Asn Phe Lys Trp  
 115 120 125

Pro Asp Ser Leu Asp Cys Arg Lys Leu Pro Asn Lys Asn Asp Pro Asn  
 130 135 140

Tyr Leu Cys Met Glu Ala Pro Asn Asn Gly Ser Asp Glu Pro Thr Arg  
 145 150 155 160

Gly Ser Gly Leu Phe Pro Pro Leu Phe Arg Pro Gln Arg Pro His Ser  
 165 170 175

Ala Gln Glu His Pro Leu Lys Asp Gly Gly Pro Gly Arg Gly Gly Cys  
 180 185 190

Asp Asn Pro Gly Lys Phe His His Val Glu Lys Ser Ala Ser Cys Ala  
 195 200 205

Pro Leu Cys Thr Pro Gly Val Asp Val Tyr Trp Ser Arg Glu Asp Lys  
 210 215 220

Arg Phe Ala Val Val Trp Leu Ala Ile Trp Ala Val Leu Cys Phe Phe  
 225 230 235 240

Ser Ser Ala Phe Thr Val Leu Thr Phe Leu Ile Asp Pro Ala Arg Phe  
 245 250 255

Arg Tyr Pro Glu Arg Pro Ile Ile Phe Leu Ser Met Cys Tyr Cys Val  
 260 265 270

Tyr Ser Val Gly Tyr Leu Ile Arg Leu Phe Ala Gly Ala Glu Ser Ile  
 275 280 285

Ala Cys Asp Arg Asp Ser Gly Gln Leu Tyr Val Ile Gln Glu Gly Leu  
 290 295 300

Glu Ser Thr Gly Cys Thr Leu Val Phe Leu Val Leu Tyr Tyr Phe Gly  
 305 310 315 320

Met Ala Ser Ser Leu Trp Trp Val Val Leu Thr Leu Thr Trp Phe Leu  
 325 330 335

Ala Ala Gly Lys Lys Trp Gly His Glu Ala Ile Glu Ala Asn Ser Ser  
 340 345 350

Tyr Phe His Leu Ala Ala Trp Ala Ile Pro Ala Val Lys Thr Ile Leu  
 355 360 365

Ile Leu Val Met Arg Arg Val Ala Gly Asp Glu Leu Thr Gly Val Cys  
 370 375 380

Tyr Val Gly Ser Met Asp Val Asn Ala Leu Thr Gly Phe Val Leu Ile  
 385 390 395 400

Pro Leu Ala Cys Tyr Leu Val Ile Gly Thr Ser Phe Ile Leu Ser Gly  
 405 410 415

Phe Val Ala Leu Phe His Ile Arg Arg Val Met Lys Thr Gly Gly Glu  
 420 425 430

Asn Thr Asp Lys Leu Glu Lys Leu Met Val Arg Ile Gly Leu Phe Ser  
 435 440 445

Val Leu Tyr Thr Val Pro Ala Thr Cys Val Ile Ala Cys Tyr Phe Tyr  
 450 455 460

Glu Arg Leu Asn Met Asp Tyr Trp Lys Ile Leu Ala Ala Gln His Lys  
 465 470 475 480

Cys Lys Met Asn Asn Gln Thr Lys Thr Leu Asp Cys Leu Met Ala Ala  
 485 490 495

Ser Ile Pro Ala Val Glu Ile Phe Met Val Lys Ile Phe Met Leu Leu  
 500 505 510

Val Val Gly Ile Thr Ser Gly Met Trp Ile Trp Thr Ser Lys Thr Leu  
 515 520 525

Gln Ser Trp Gln Gln Val Cys Ser Arg Arg Leu Lys Lys Lys Ser Arg  
 530 535 540

Arg Lys Pro Ala Ser Val Ile Thr Ser Gly Gly Ile Tyr Lys Lys Ala  
 545 550 555 560

Gln His Pro Gln Lys Thr His His Gly Lys Tyr Glu Ile Pro Ala Gln  
 565 570 575

Ser Pro Thr Cys Val  
 580

<210> 81  
 <211> 539  
 <212> PRT  
 <213> Homo sapiens

<400> 81

Met Val Pro Gly Ala Arg Gly Gly Gly Ala Leu Ala Arg Ala Ala Gly  
 1 5 10 15

Arg Gly Leu Leu Ala Leu Leu Leu Ala Val Ser Ala Pro Leu Arg Leu  
 20 25 30

Gln Ala Glu Glu Leu Gly Asp Gly Cys Gly His Leu Val Thr Tyr Gln  
 35 40 45

Asp Ser Gly Thr Met Thr Ser Lys Asn Tyr Pro Gly Thr Tyr Pro Asn  
 50 55 60

His Thr Val Cys Glu Lys Thr Ile Thr Val Pro Lys Gly Lys Arg Leu  
 65 70 75 80

Ile Leu Arg Leu Gly Asp Leu Asp Ile Glu Ser Gln Thr Cys Ala Ser  
 85 90 95

Asp Tyr Leu Leu Phe Thr Ser Ser Ser Asp Gln Tyr Gly Pro Tyr Cys  
 100 105 110

Gly Ser Met Thr Val Pro Lys Glu Leu Leu Leu Asn Thr Ser Glu Val  
 115 120 125

Thr Val Arg Phe Glu Ser Gly Ser His Ile Ser Gly Arg Gly Phe Leu  
 130 135 140

Leu Thr Tyr Ala Ser Ser Asp His Pro Asp Leu Ile Thr Cys Leu Glu  
 145 150 155 160

Arg Ala Ser His Tyr Leu Lys Thr Glu Tyr Ser Lys Phe Cys Pro Ala  
 165 170 175

Gly Cys Arg Asp Val Ala Gly Asp Ile Ser Gly Asn Met Val Asp Gly  
180 185 190

Tyr Arg Asp Thr Ser Leu Leu Cys Lys Ala Ala Ile His Ala Gly Ile  
195 200 205

Ile Ala Asp Glu Leu Gly Gly Gln Ile Ser Val Leu Gln Arg Lys Gly  
210 215 220

Ile Ser Arg Tyr Glu Gly Ile Leu Ala Asn Gly Val Leu Ser Arg Asp  
225 230 235 240

Gly Ser Leu Ser Asp Lys Arg Phe Leu Phe Thr Ser Asn Gly Cys Ser  
245 250 255

Arg Ser Leu Ser Phe Glu Pro Asp Gly Gln Ile Arg Ala Ser Ser Ser  
260 265 270

Trp Gln Ser Val Asn Glu Ser Gly Asp Gln Val His Trp Ser Pro Gly  
275 280 285

Gln Ala Arg Leu Gln Asp Gln Gly Pro Ser Trp Ala Ser Gly Asp Ser  
290 295 300

Ser Asn Asn His Lys Pro Arg Glu Trp Leu Glu Ile Asp Leu Gly Glu  
305 310 315 320

Lys Lys Lys Ile Thr Gly Ile Arg Thr Thr Gly Ser Thr Gln Ser Asn  
325 330 335

Phe Asn Phe Tyr Val Lys Ser Phe Val Met Asn Phe Lys Asn Asn Asn  
340 345 350

Ser Lys Trp Lys Thr Tyr Lys Gly Ile Val Asn Asn Glu Glu Lys Val  
355 360 365

Phe Gln Gly Asn Ser Asn Phe Arg Asp Pro Val Gln Asn Asn Phe Ile  
370 375 380

Pro Pro Ile Val Ala Arg Tyr Val Arg Val Val Pro Gln Thr Trp His  
385 390 395 400

Gln Arg Ile Ala Leu Lys Val Glu Leu Ile Gly Cys Gln Ile Thr Gln  
405 410 415

Gly Asn Asp Ser Leu Val Trp Arg Lys Thr Ser Gln Ser Thr Ser Val  
420 425 430

Ser Thr Lys Lys Glu Asp Glu Thr Ile Thr Arg Pro Ile Pro Ser Glu  
435 440 445

Glu Thr Ser Thr Gly Ile Asn Ile Thr Thr Val Ala Ile Pro Leu Val  
450 455 460

Leu Leu Val Val Leu Val Phe Ala Gly Met Gly Ile Phe Ala Ala Phe  
465 470 475 480

Arg Lys Lys Lys Lys Lys Gly Ser Pro Tyr Gly Ser Ala Glu Ala Gln  
485 490 495

Lys Thr Asp Cys Trp Lys Gln Ile Lys Tyr Pro Phe Ala Arg His Gln  
500 505 510

Ser Ala Glu Phe Thr Ile Ser Tyr Asp Asn Glu Lys Glu Met Thr Gln  
515 520 525

Lys Leu Asp Leu Ile Thr Ser Asp Met Ala Gly  
530 535

<210> 82  
<211> 539  
<212> PRT  
<213> Homo sapiens

<400> 82

Met Val Pro Gly Ala Arg Gly Gly Gly Ala Leu Ala Arg Ala Ala Gly  
1 5 10 15

Arg Gly Leu Leu Ala Leu Leu Leu Ala Val Ser Ala Pro Leu Arg Leu  
20 25 30

Gln Ala Glu Glu Leu Gly Asp Gly Cys Gly His Leu Val Thr Tyr Gln  
35 40 45

Asp Ser Gly Thr Met Thr Ser Lys Asn Tyr Pro Gly Thr Tyr Pro Asn  
50 55 60

His Thr Val Cys Glu Lys Thr Ile Thr Val Pro Lys Gly Lys Arg Leu  
65 70 75 80

Ile Leu Arg Leu Gly Asp Leu Asp Ile Glu Ser Gln Thr Cys Ala Ser

85					90					95					
Asp	Tyr	Leu	Leu	Phe	Thr	Ser	Ser	Ser	Asp	Gln	Tyr	Gly	Pro	Tyr	Cys
		100						105					110		
Gly	Ser	Met	Thr	Val	Pro	Lys	Glu	Leu	Leu	Leu	Asn	Thr	Ser	Glu	Val
		115					120					125			
Thr	Val	Arg	Phe	Glu	Ser	Gly	Ser	His	Ile	Ser	Gly	Arg	Gly	Phe	Leu
	130					135					140				
Leu	Thr	Tyr	Ala	Ser	Ser	Asp	His	Pro	Asp	Leu	Ile	Thr	Cys	Leu	Glu
145						150					155				160
Arg	Ala	Ser	His	Tyr	Leu	Lys	Thr	Glu	Tyr	Ser	Lys	Phe	Cys	Pro	Ala
				165					170					175	
Gly	Cys	Arg	Asp	Val	Ala	Gly	Asp	Ile	Ser	Gly	Asn	Met	Val	Asp	Gly
			180					185					190		
Tyr	Arg	Asp	Thr	Ser	Leu	Leu	Cys	Lys	Ala	Ala	Ile	His	Ala	Gly	Ile
		195					200					205			
Ile	Ala	Asp	Glu	Leu	Gly	Gly	Gln	Ile	Ser	Val	Leu	Gln	Arg	Lys	Gly
	210					215					220				
Ile	Ser	Arg	Tyr	Glu	Gly	Ile	Leu	Ala	Asn	Gly	Val	Leu	Ser	Arg	Asp
225						230					235				240
Gly	Ser	Leu	Ser	Asp	Lys	Arg	Phe	Leu	Phe	Thr	Ser	Asn	Gly	Cys	Ser
				245					250					255	
Arg	Ser	Leu	Ser	Phe	Glu	Pro	Asp	Gly	Gln	Ile	Arg	Ala	Ser	Ser	Ser
			260					265					270		
Trp	Gln	Ser	Val	Asn	Glu	Ser	Gly	Asp	Gln	Val	His	Trp	Ser	Pro	Gly
	275						280					285			
Gln	Ala	Arg	Leu	Gln	Asp	Gln	Gly	Pro	Ser	Trp	Ala	Ser	Gly	Asp	Ser
	290					295					300				
Ser	Asn	Asn	His	Lys	Pro	Arg	Glu	Trp	Leu	Glu	Ile	Asp	Leu	Gly	Glu
305						310					315				320
Lys	Lys	Lys	Ile	Thr	Gly	Ile	Arg	Thr	Thr	Gly	Ser	Thr	Gln	Ser	Asn
				325					330					335	

Phe Asn Phe Tyr Val Lys Ser Phe Val Met Asn Phe Lys Asn Asn Asn  
340 345 350

Ser Lys Trp Lys Thr Tyr Lys Gly Ile Val Asn Asn Glu Glu Lys Val  
355 360 365

Phe Gln Gly Asn Ser Asn Phe Arg Asp Pro Val Gln Asn Asn Phe Ile  
370 375 380

Pro Pro Ile Val Ala Arg Tyr Val Arg Val Val Pro Gln Thr Trp His  
385 390 395 400

Gln Arg Ile Ala Leu Lys Val Glu Leu Ile Gly Cys Gln Ile Thr Gln  
405 410 415

Gly Asn Asp Ser Leu Val Trp Arg Lys Thr Ser Gln Ser Thr Ser Val  
420 425 430

Ser Thr Lys Lys Glu Asp Glu Thr Ile Thr Arg Pro Ile Pro Ser Glu  
435 440 445

Glu Thr Ser Thr Gly Ile Asn Ile Thr Thr Val Ala Ile Pro Leu Val  
450 455 460

Leu Leu Val Val Leu Val Phe Ala Gly Met Gly Ile Phe Ala Ala Phe  
465 470 475 480

Arg Lys Lys Lys Lys Lys Gly Ser Pro Tyr Gly Ser Ala Glu Ala Gln  
485 490 495

Lys Thr Asp Cys Trp Lys Gln Ile Lys Tyr Pro Phe Ala Arg His Gln  
500 505 510

Ser Ala Glu Phe Thr Ile Ser Tyr Asp Asn Glu Lys Glu Met Thr Gln  
515 520 525

Lys Leu Asp Leu Ile Thr Ser Asp Met Ala Gly  
530 535

<210> 83

<211> 237

<212> PRT

<213> Homo Sapiens

<400> 83



Met Ala Gly Val Ser Ala Cys Ile Lys Tyr Ser Met Phe Thr Phe Asn  
 1 5 10 15  
 Phe Leu Phe Trp Leu Cys Gly Ile Leu Ile Leu Ala Leu Ala Ile Trp  
 20 25 30  
 Val Arg Val Ser Asn Asp Ser Gln Ala Ile Phe Gly Ser Glu Asp Val  
 35 40 45  
 Gly Ser Ser Ser Tyr Val Ala Val Asp Ile Leu Ile Ala Val Gly Ala  
 50 55 60  
 Ile Ile Met Ile Leu Gly Phe Leu Gly Cys Cys Gly Ala Ile Lys Glu  
 65 70 75 80  
 Ser Arg Cys Met Leu Leu Leu Phe Phe Ile Gly Leu Leu Leu Ile Leu  
 85 90 95  
 Leu Leu Gln Val Ala Thr Gly Ile Leu Gly Ala Val Phe Lys Ser Lys  
 100 105 110  
 Ser Asp Arg Ile Val Asn Glu Thr Leu Tyr Glu Asn Thr Lys Leu Leu  
 115 120 125  
 Ser Ala Thr Gly Glu Ser Glu Lys Gln Phe Gln Glu Ala Ile Ile Val  
 130 135 140  
 Phe Gln Glu Glu Phe Lys Cys Cys Gly Leu Val Asn Gly Ala Ala Asp  
 145 150 155 160  
 Trp Gly Asn Asn Phe Gln His Tyr Pro Glu Leu Cys Ala Cys Leu Asp  
 165 170 175  
 Lys Gln Arg Pro Cys Gln Ser Tyr Asn Gly Lys Gln Val Tyr Lys Glu  
 180 185 190  
 Thr Cys Ile Ser Phe Ile Lys Asp Phe Leu Ala Lys Asn Leu Ile Ile  
 195 200 205  
 Val Ile Gly Ile Ser Phe Gly Leu Ala Val Ile Glu Ile Leu Gly Leu  
 210 215 220  
 Val Phe Ser Met Val Leu Tyr Cys Gln Ile Gly Asn Lys  
 225 230 235

<210> 84  
 <211> 202  
 <212> PRT  
 <213> Homo Sapiens

<400> 84

Met Cys Thr Gly Gly Cys Ala Arg Cys Leu Gly Gly Thr Leu Ile Pro  
 1 5 10 15

Leu Ala Phe Phe Gly Phe Leu Ala Asn Ile Leu Leu Phe Phe Pro Gly  
 20 25 30

Gly Lys Val Ile Asp Asp Asn Asp His Leu Ser Gln Glu Ile Trp Phe  
 35 40 45

Phe Gly Gly Ile Leu Gly Ser Gly Val Leu Met Ile Phe Pro Ala Leu  
 50 55 60

Val Phe Leu Gly Leu Lys Asn Asn Asp Cys Cys Gly Cys Cys Gly Asn  
 65 70 75 80

Glu Gly Cys Gly Lys Arg Phe Ala Met Phe Thr Ser Thr Ile Phe Ala  
 85 90 95

Val Val Gly Phe Leu Gly Ala Gly Tyr Ser Phe Ile Ile Ser Ala Ile  
 100 105 110

Ser Ile Asn Lys Gly Pro Lys Cys Leu Met Ala Asn Ser Thr Trp Gly  
 115 120 125

Tyr Pro Phe His Asp Gly Asp Tyr Leu Asn Asp Glu Ala Leu Trp Asn  
 130 135 140

Lys Cys Arg Glu Pro Leu Asn Val Val Pro Trp Asn Leu Thr Leu Phe  
 145 150 155 160

Ser Ile Leu Leu Val Val Gly Gly Ile Gln Met Val Leu Cys Ala Ile  
 165 170 175

Gln Val Val Asn Gly Leu Leu Gly Thr Leu Cys Gly Asp Cys Gln Cys  
 180 185 190

Cys Gly Cys Cys Gly Gly Asp Gly Pro Val  
 195 200

<210> 85  
 <211> 677

<212> PRT  
<213> Homo Sapiens

<400> 85

Met Gln Pro Thr Leu Leu Leu Ser Leu Leu Gly Ala Val Gly Leu Ala  
1 5 10 15

Ala Val Asn Ser Met Pro Val Asp Asn Arg Asn His Asn Glu Gly Met  
20 25 30

Val Thr Arg Cys Ile Ile Glu Val Leu Ser Asn Ala Leu Ser Lys Ser  
35 40 45

Ser Ala Pro Pro Ile Thr Pro Glu Cys Arg Gln Val Leu Lys Thr Ser  
50 55 60

Arg Lys Asp Val Lys Asp Lys Glu Thr Thr Glu Asn Glu Asn Thr Lys  
65 70 75 80

Phe Glu Val Arg Leu Leu Arg Asp Pro Ala Asp Ala Ser Glu Ala His  
85 90 95

Glu Ser Ser Ser Arg Gly Glu Ala Gly Ala Pro Gly Glu Glu Asp Ile  
100 105 110

Gln Gly Pro Thr Lys Ala Asp Thr Glu Lys Trp Ala Glu Gly Gly Gly  
115 120 125

His Ser Arg Glu Arg Ala Asp Glu Pro Gln Trp Ser Leu Tyr Pro Ser  
130 135 140

Asp Ser Gln Val Ser Glu Glu Val Lys Thr Arg His Ser Glu Lys Ser  
145 150 155 160

Gln Arg Glu Asp Glu Glu Glu Glu Glu Gly Glu Asn Tyr Gln Lys Gly  
165 170 175

Glu Arg Gly Glu Asp Ser Ser Glu Glu Lys His Leu Glu Glu Pro Gly  
180 185 190

Glu Thr Gln Asn Ala Phe Leu Asn Glu Arg Lys Gln Ala Ser Ala Ile  
195 200 205

Lys Lys Glu Glu Leu Val Ala Arg Ser Glu Thr His Ala Ala Gly His  
210 215 220

Ser Gln Glu Lys Thr His Ser Arg Glu Lys Ser Ser Gln Glu Ser Gly  
 225 230 235 240  
 Glu Glu Ala Gly Ser Gln Glu Asn His Pro Gln Glu Ser Lys Gly Gln  
 245 250 255  
 Pro Arg Ser Gln Glu Glu Ser Glu Glu Gly Glu Glu Asp Ala Thr Ser  
 260 265 270  
 Glu Val Asp Lys Arg Arg Thr Arg Pro Arg His His His Gly Arg Ser  
 275 280 285  
 Arg Pro Asp Arg Ser Ser Gln Gly Gly Ser Leu Pro Ser Glu Glu Lys  
 290 295 300  
 Gly His Pro Gln Glu Glu Ser Glu Glu Ser Asn Val Ser Met Ala Ser  
 305 310 315 320  
 Leu Gly Glu Lys Arg Asp His His Ser Thr His Tyr Arg Ala Ser Glu  
 325 330 335  
 Glu Glu Pro Glu Tyr Gly Glu Glu Ile Lys Gly Tyr Pro Gly Val Gln  
 340 345 350  
 Ala Pro Glu Asp Leu Glu Trp Glu Arg Tyr Arg Gly Arg Gly Ser Glu  
 355 360 365  
 Glu Tyr Arg Ala Pro Arg Pro Gln Ser Glu Glu Ser Trp Asp Glu Glu  
 370 375 380  
 Asp Lys Arg Asn Tyr Pro Ser Leu Glu Leu Asp Lys Met Ala His Gly  
 385 390 395 400  
 Tyr Gly Glu Glu Ser Glu Glu Glu Arg Gly Leu Glu Pro Gly Lys Gly  
 405 410 415  
 Arg His His Arg Gly Arg Gly Gly Glu Pro Arg Ala Tyr Phe Met Ser  
 420 425 430  
 Asp Thr Arg Glu Glu Lys Arg Phe Leu Gly Glu Gly His His Arg Val  
 435 440 445  
 Gln Glu Asn Gln Met Asp Lys Ala Arg Arg His Pro Gln Gly Ala Trp  
 450 455 460  
 Lys Glu Leu Asp Arg Asn Tyr Leu Asn Tyr Gly Glu Glu Gly Ala Pro



Met Lys Leu Leu Cys Glu Gly Leu Lys Gln Pro Asn Cys Val Leu Gln  
 1 5 10 15  
 Thr Leu Arg Trp Tyr Arg Cys Leu Ile Ser Ser Ala Ser Cys Gly Ala  
 20 25 30  
 Leu Ala Ala Val Leu Ser Thr Ser Gln Trp Leu Thr Glu Leu Glu Phe  
 35 40 45  
 Ser Glu Thr Lys Leu Glu Ala Ser Ala Leu Lys Leu Leu Tyr Gly Gly  
 50 55 60  
 Leu Lys Asp Pro Asn Cys Lys Leu Gln Lys Leu Asn Leu Gln Phe Ser  
 65 70 75 80  
 Leu Ser Val Thr Ala Ala Lys Leu Pro Val Gly Met Val Gly Asn Cys  
 85 90 95  
 Ser Gly Phe Ser Gly Ser Leu Val Gln Ser His Phe Gly Tyr Cys Gln  
 100 105 110  
 Asp Ser Ser Phe Lys Cys Asp Leu Cys Lys Leu Leu Trp Pro Ser Thr  
 115 120 125  
 Arg Val Ala Ala Ala Lys Asp Cys Gly Ser Pro Lys Ser Phe Leu Ser  
 130 135 140  
 Glu Gly Leu Asn Trp Ala Gly Arg Leu Glu Ala Val Glu Glu Val Leu  
 145 150 155 160  
 Gly Leu Gly Val Leu Val Gln Pro Gly Asp Pro Ala Ser Gln Gly Gly  
 165 170 175  
 Gly His Cys Glu Asn Tyr Gly Ser Phe Arg Asp Leu Val Asp Leu Glu  
 180 185 190  
 Val Lys Ala Glu Pro Ser Leu Arg Lys Gly Gly Met Asp Leu Gln Arg  
 195 200 205  
 Pro Thr Leu Gln Val Val Leu Leu Cys Lys Ile Phe Ser Leu Lys Leu  
 210 215 220  
 Phe Leu Phe Ile Ala Leu Pro Asn Ser Pro Gly Gln Val Ser Val Val  
 225 230 235 240

Gln Val Thr Ile Pro Asp Gly Phe Val Asn Val Thr Val Gly Ser Asn  
 245 250 255  
 Val Thr Leu Ile Cys Ile Tyr Thr Thr Thr Val Ala Ser Arg Glu Gln  
 260 265 270  
 Leu Ser Ile Gln Trp Ser Phe Phe His Lys Lys Glu Met Glu Pro Ile  
 275 280 285  
 Ser Ser Pro Trp Glu Glu Gly Lys Trp Pro Asp Val Glu Ala Val Lys  
 290 295 300  
 Gly Thr Leu Asp Gly Gln Gln Ala Glu Leu Gln Ile Tyr Phe Ser Gln  
 305 310 315 320  
 Gly Gly Gln Ala Val Ala Ile Gly Gln Phe Lys Asp Arg Ile Thr Gly  
 325 330 335  
 Ser Asn Asp Pro Gly Asn Ala Ser Ile Thr Ile Ser His Met Gln Pro  
 340 345 350  
 Ala Asp Ser Gly Ile Tyr Ile Cys Asp Val Asn Asn Pro Pro Asp Phe  
 355 360 365  
 Leu Gly Gln Asn Gln Gly Ile Leu Asn Val Ser Val Leu Val Lys Pro  
 370 375 380  
 Ser Lys Pro Leu Cys Ser Val Gln Gly Arg Pro Glu Thr Gly His Thr  
 385 390 395 400  
 Ile Ser Leu Ser Cys Leu Ser Ala Leu Gly Thr Pro Ser Pro Val Tyr  
 405 410 415  
 Tyr Trp His Lys Leu Glu Gly Arg Asp Ile Val Pro Val Lys Glu Asn  
 420 425 430  
 Phe Asn Pro Thr Thr Gly Ile Leu Val Ile Gly Asn Leu Thr Asn Phe  
 435 440 445  
 Glu Gln Gly Tyr Tyr Gln Cys Thr Ala Ile Asn Arg Leu Gly Asn Ser  
 450 455 460  
 Ser Cys Glu Ile Asp Leu Thr Ser Ser His Pro Glu Val Gly Ile Ile  
 465 470 475 480  
 Val Gly Ala Leu Ile Gly Ser Leu Val Gly Ala Ala Ile Ile Ile Ser





Lys Glu Met Glu Pro Ile Ser Ser Pro Trp Glu Glu Gly Lys Trp Pro  
 65 70 75 80

Asp Val Glu Ala Val Lys Gly Thr Leu Asp Gly Gln Gln Ala Glu Leu  
 85 90 95

Gln Ile Tyr Phe Ser Gln Gly Gly Gln Ala Val Ala Ile Gly Gln Phe  
 100 105 110

Lys Asp Arg Ile Thr Gly Ser Asn Asp Pro Gly Asn Ala Ser Ile Thr  
 115 120 125

Ile Ser His Met Gln Pro Ala Asp Ser Gly Ile Tyr Ile Cys Asp Val  
 130 135 140

Asn Asn Pro Pro Asp Phe Leu Gly Gln Asn Gln Gly Ile Leu Asn Val  
 145 150 155 160

Ser Val Leu Val Lys Pro Ser Lys Pro Leu Cys Ser Val Gln Gly Arg  
 165 170 175

Pro Glu Thr Gly His Thr Ile Ser Leu Ser Cys Leu Ser Ala Leu Gly  
 180 185 190

Thr Pro Ser Pro Val Tyr Tyr Trp His Lys Leu Glu Gly Arg Asp Ile  
 195 200 205

Val Pro Val Lys Glu Asn Phe Asn Pro Thr Thr Gly Ile Leu Val Ile  
 210 215 220

Gly Asn Leu Thr Asn Phe Glu Gln Gly Tyr Tyr Gln Cys Thr Ala Ile  
 225 230 235 240

Asn Arg Leu Gly Asn Ser Ser Cys Glu Ile Asp Leu Thr Ser Ser His  
 245 250 255

Pro Glu Val Gly Ile Ile Val Gly Ala Leu Ile Gly Ser Leu Val Gly  
 260 265 270

Ala Ala Ile Ile Ile Ser Val Val Cys Phe Ala Arg Asn Lys Ala Lys  
 275 280 285

Ala Lys Ala Lys Glu Arg Asn Ser Lys Thr Ile Ala Glu Leu Glu Pro  
 290 295 300

Met Thr Lys Ile Asn Pro Arg Gly Glu Ser Glu Ala Met Pro Arg Glu  
 305 310 315 320

Asp Ala Thr Gln Leu Glu Val Thr Leu Pro Ser Ser Ile His Glu Thr  
 325 330 335

Gly Pro Asp Thr Ile Gln Glu Pro Asp Tyr Glu Pro Lys Pro Thr Gln  
 340 345 350

Glu Pro Ala Pro Glu Pro Ala Pro Gly Ser Glu Pro Met Ala Val Pro  
 355 360 365

Asp Leu Asp Ile Glu Leu Glu Leu Glu Pro Glu Thr Gln Ser Glu Leu  
 370 375 380

Glu Pro Glu Pro Glu Pro Glu Pro Glu Ser Glu Pro Gly Val Val Val  
 385 390 395 400

Glu Pro Leu Ser Glu Asp Glu Lys Gly Val Val Lys Ala  
 405 410

<210> 88

<211> 397

<212> PRT

<213> Homo Sapiens

<400> 88

Met Arg Ser Pro Ser Ala Ala Trp Leu Leu Gly Ala Ala Ile Leu Leu  
 1 5 10 15

Ala Ala Ser Leu Ser Cys Ser Gly Thr Ile Gln Gly Thr Asn Arg Ser  
 20 25 30

Ser Lys Gly Arg Ser Leu Ile Gly Lys Val Asp Gly Thr Ser His Val  
 35 40 45

Thr Gly Lys Gly Val Thr Val Glu Thr Val Phe Ser Val Asp Glu Phe  
 50 55 60

Ser Ala Ser Val Leu Thr Gly Lys Leu Thr Thr Val Phe Leu Pro Ile  
 65 70 75 80

Val Tyr Thr Ile Val Phe Val Val Gly Leu Pro Ser Asn Gly Met Ala  
 85 90 95

Leu Trp Val Phe Leu Phe Arg Thr Lys Lys Lys His Pro Ala Val Ile  
 100 105 110

Tyr Met Ala Asn Leu Ala Leu Ala Asp Leu Leu Ser Val Ile Trp Phe  
115 120 125

Pro Leu Lys Ile Ala Tyr His Ile His Ala Asn Asn Trp Ile Tyr Gly  
130 135 140

Glu Ala Leu Cys Asn Val Leu Ile Gly Phe Phe Tyr Gly Asn Met Tyr  
145 150 155 160

Cys Ser Ile Leu Phe Met Thr Cys Leu Ser Val Gln Arg Tyr Trp Val  
165 170 175

Ile Val Asn Pro Met Gly His Ser Arg Lys Lys Ala Asn Ile Ala Ile  
180 185 190

Gly Ile Ser Leu Ala Ile Trp Leu Leu Ile Leu Leu Val Thr Ile Pro  
195 200 205

Leu Tyr Val Val Lys Gln Thr Ile Phe Ile Pro Ala Leu Asn Ile Thr  
210 215 220

Thr Cys His Asp Val Leu Pro Glu Gln Leu Leu Val Gly Asp Met Phe  
225 230 235 240

Asn Tyr Phe Leu Ser Leu Ala Ile Gly Val Phe Leu Phe Pro Ala Phe  
245 250 255

Leu Thr Ala Ser Ala Tyr Val Leu Met Ile Arg Met Leu Arg Ser Ser  
260 265 270

Ala Met Asp Glu Asn Ser Glu Lys Lys Arg Lys Arg Ala Ile Lys Leu  
275 280 285

Ile Val Thr Val Leu Ala Met Tyr Leu Ile Cys Phe Thr Pro Ser Asn  
290 295 300

Leu Leu Leu Val Val His Tyr Phe Leu Ile Lys Ser Gln Gly Gln Ser  
305 310 315 320

His Val Tyr Ala Leu Tyr Ile Val Ala Leu Cys Leu Ser Thr Leu Asn  
325 330 335

Ser Cys Ile Asp Pro Phe Val Tyr Tyr Phe Val Ser His Asp Phe Arg  
340 345 350

Asp His Ala Lys Asn Ala Leu Leu Cys Arg Ser Val Arg Thr Val Lys  
 355 360 365

Gln Met Gln Val Ser Leu Thr Ser Lys Lys His Ser Arg Lys Ser Ser  
 370 375 380

Ser Tyr Ser Ser Ser Ser Thr Thr Val Lys Thr Ser Tyr  
 385 390 395

<210> 89  
 <211> 1560  
 <212> PRT  
 <213> Homo Sapiens

<400> 89

Met Pro Cys Ala Gln Arg Ser Trp Leu Ala Asn Leu Ser Val Val Ala  
 1 5 10 15

Gln Leu Leu Asn Phe Gly Ala Leu Cys Tyr Gly Arg Gln Pro Gln Pro  
 20 25 30

Gly Pro Val Arg Phe Pro Asp Arg Arg Gln Glu His Phe Ile Lys Gly  
 35 40 45

Leu Pro Glu Tyr His Val Val Gly Pro Val Arg Val Asp Ala Ser Gly  
 50 55 60

His Phe Leu Ser Tyr Gly Leu His Tyr Pro Ile Thr Ser Ser Arg Arg  
 65 70 75 80

Lys Arg Asp Leu Asp Gly Ser Glu Asp Trp Val Tyr Tyr Arg Ile Ser  
 85 90 95

His Glu Glu Lys Asp Leu Phe Phe Asn Leu Thr Val Asn Gln Gly Phe  
 100 105 110

Leu Ser Asn Ser Tyr Ile Met Glu Lys Arg Tyr Gly Asn Leu Ser His  
 115 120 125

Val Lys Met Met Ala Ser Ser Ala Pro Leu Cys His Leu Ser Gly Thr  
 130 135 140

Val Leu Gln Gln Gly Thr Arg Val Gly Thr Ala Ala Leu Ser Ala Cys  
 145 150 155 160

His Gly Leu Thr Gly Phe Phe Gln Leu Pro His Gly Asp Phe Phe Ile

	165		170		175
Glu Pro Val Lys Lys His Pro Leu Val Glu Gly Gly Tyr His Pro His	180		185		190
Ile Val Tyr Arg Arg Gln Lys Val Pro Glu Thr Lys Glu Pro Thr Cys	195		200		205
Gly Leu Lys Asp Ser Val Asn Ile Ser Gln Lys Gln Glu Leu Trp Arg	210		215		220
Glu Lys Trp Glu Arg His Asn Leu Pro Ser Arg Ser Leu Ser Arg Arg	225		230		235
Ser Ile Ser Lys Glu Arg Trp Val Glu Thr Leu Val Val Ala Asp Thr	245		250		255
Lys Met Ile Glu Tyr His Gly Ser Glu Asn Val Glu Ser Tyr Ile Leu	260		265		270
Thr Ile Met Asn Met Val Thr Gly Leu Phe His Asn Pro Ser Ile Gly	275		280		285
Asn Ala Ile His Ile Val Val Val Arg Leu Ile Leu Leu Glu Glu Glu	290		295		300
Glu Gln Gly Leu Lys Ile Val His His Ala Glu Lys Thr Leu Ser Ser	305		310		315
Phe Cys Lys Trp Gln Lys Ser Ile Asn Pro Lys Ser Asp Leu Asn Pro	325		330		335
Val His His Asp Val Ala Val Leu Leu Thr Arg Lys Asp Ile Cys Ala	340		345		350
Gly Phe Asn Arg Pro Cys Glu Thr Leu Gly Leu Ser His Leu Ser Gly	355		360		365
Met Cys Gln Pro His Arg Ser Cys Asn Ile Asn Glu Asp Ser Gly Leu	370		375		380
Pro Leu Ala Phe Thr Ile Ala His Glu Leu Gly His Ser Phe Gly Ile	385		390		395
Gln His Asp Gly Lys Glu Asn Asp Cys Glu Pro Val Gly Arg His Pro	405		410		415

Tyr Ile Met Ser Arg Gln Leu Gln Tyr Asp Pro Thr Pro Leu Thr Trp  
 420 425 430

Ser Lys Cys Ser Glu Glu Tyr Ile Thr Arg Phe Leu Asp Arg Gly Trp  
 435 440 445

Gly Phe Cys Leu Asp Asp Ile Pro Lys Lys Lys Gly Leu Lys Ser Lys  
 450 455 460

Val Ile Ala Pro Gly Val Ile Tyr Asp Val His His Gln Cys Gln Leu  
 465 470 475 480

Gln Tyr Gly Pro Asn Ala Thr Phe Cys Gln Glu Val Glu Asn Val Cys  
 485 490 495

Gln Thr Leu Trp Cys Ser Val Lys Gly Phe Cys Arg Ser Lys Leu Asp  
 500 505 510

Ala Ala Ala Asp Gly Thr Gln Cys Gly Glu Lys Lys Trp Cys Met Ala  
 515 520 525

Gly Lys Cys Ile Thr Val Gly Lys Lys Pro Glu Ser Ile Pro Gly Gly  
 530 535 540

Trp Gly Arg Trp Ser Pro Trp Ser His Cys Ser Arg Thr Cys Gly Ala  
 545 550 555 560

Gly Val Gln Ser Ala Glu Arg Leu Cys Asn Asn Pro Glu Pro Lys Phe  
 565 570 575

Gly Gly Lys Tyr Cys Thr Gly Glu Arg Lys Arg Tyr Arg Leu Cys Asn  
 580 585 590

Val His Pro Cys Arg Ser Glu Ala Pro Thr Phe Arg Gln Met Gln Cys  
 595 600 605

Ser Glu Phe Asp Thr Val Pro Tyr Lys Asn Glu Leu Tyr His Trp Phe  
 610 615 620

Pro Ile Phe Asn Pro Ala His Pro Cys Glu Leu Tyr Cys Arg Pro Ile  
 625 630 635 640

Asp Gly Gln Phe Ser Glu Lys Met Leu Asp Ala Val Ile Asp Gly Thr  
 645 650 655

Pro Cys Phe Glu Gly Gly Asn Ser Arg Asn Val Cys Ile Asn Gly Ile  
 660 665 670

Cys Lys Met Val Gly Cys Asp Tyr Glu Ile Asp Ser Asn Ala Thr Glu  
 675 680 685

Asp Arg Cys Gly Val Cys Leu Gly Asp Gly Ser Ser Cys Gln Thr Val  
 690 695 700

Arg Lys Met Phe Lys Gln Lys Glu Gly Ser Gly Tyr Val Asp Ile Gly  
 705 710 715 720

Leu Ile Pro Lys Gly Ala Arg Asp Ile Arg Val Met Glu Ile Glu Gly  
 725 730 735

Ala Gly Asn Phe Leu Ala Ile Arg Ser Glu Asp Pro Glu Lys Tyr Tyr  
 740 745 750

Leu Asn Gly Gly Phe Ile Ile Gln Trp Asn Gly Asn Tyr Lys Leu Ala  
 755 760 765

Gly Thr Val Phe Gln Tyr Asp Arg Lys Gly Asp Leu Glu Lys Leu Met  
 770 775 780

Ala Thr Gly Pro Thr Asn Glu Ser Val Trp Ile Gln Leu Leu Phe Gln  
 785 790 795 800

Val Thr Asn Pro Gly Ile Lys Tyr Glu Tyr Thr Ile Gln Lys Asp Gly  
 805 810 815

Leu Asp Asn Asp Val Glu Gln Met Tyr Phe Trp Gln Tyr Gly His Trp  
 820 825 830

Thr Glu Cys Ser Val Thr Cys Gly Thr Gly Ile Arg Arg Gln Thr Ala  
 835 840 845

His Cys Ile Lys Lys Gly Arg Gly Met Val Lys Ala Thr Phe Cys Asp  
 850 855 860

Pro Glu Thr Gln Pro Asn Gly Arg Gln Lys Lys Cys His Glu Lys Ala  
 865 870 875 880

Cys Pro Pro Arg Trp Trp Ala Gly Glu Trp Glu Ala Cys Ser Ala Thr  
 885 890 895

Cys Gly Pro His Gly Glu Lys Lys Arg Thr Val Leu Cys Ile Gln Thr  
 900 905 910

Met Val Ser Asp Glu Gln Ala Leu Pro Pro Thr Asp Cys Gln His Leu  
 915 920 925

Leu Lys Pro Lys Thr Leu Leu Ser Cys Asn Arg Asp Ile Leu Cys Pro  
 930 935 940

Ser Asp Trp Thr Val Gly Asn Trp Ser Glu Cys Ser Val Ser Cys Gly  
 945 950 955 960

Gly Gly Val Arg Ile Arg Ser Val Thr Cys Ala Lys Asn His Asp Glu  
 965 970 975

Pro Cys Asp Val Thr Arg Lys Pro Asn Ser Arg Ala Leu Cys Gly Leu  
 980 985 990

Gln Gln Cys Pro Ser Ser Arg Arg Val Leu Lys Pro Asn Lys Gly Thr  
 995 1000 1005

Ile Ser Asn Gly Lys Asn Pro Pro Thr Leu Lys Pro Val Pro Pro  
 1010 1015 1020

Pro Thr Ser Arg Pro Arg Met Leu Thr Thr Pro Thr Gly Pro Glu  
 1025 1030 1035

Ser Met Ser Thr Ser Thr Pro Ala Ile Ser Ser Pro Ser Pro Thr  
 1040 1045 1050

Thr Ala Ser Lys Glu Gly Asp Leu Gly Gly Lys Gln Trp Gln Asp  
 1055 1060 1065

Ser Ser Thr Gln Pro Glu Leu Ser Ser Arg Tyr Leu Ile Ser Thr  
 1070 1075 1080

Gly Ser Thr Ser Gln Pro Ile Leu Thr Ser Gln Ser Leu Ser Ile  
 1085 1090 1095

Gln Pro Ser Glu Glu Asn Val Ser Ser Ser Asp Thr Gly Pro Thr  
 1100 1105 1110

Ser Glu Gly Gly Leu Val Ala Thr Thr Thr Ser Gly Ser Gly Leu  
 1115 1120 1125

Ser Ser Ser Arg Asn Pro Ile Thr Trp Pro Val Thr Pro Phe Tyr



1130		1135		1140
Asn Thr Leu Thr Lys Gly Pro Glu Met Glu Ile His Ser Gly Ser				
1145		1150		1155
Gly Glu Glu Arg Glu Gln Pro Glu Asp Lys Asp Glu Ser Asn Pro				
1160		1165		1170
Val Ile Trp Thr Lys Ile Arg Val Pro Gly Asn Asp Ala Pro Val				
1175		1180		1185
Glu Ser Thr Glu Met Pro Leu Ala Pro Pro Leu Thr Pro Asp Leu				
1190		1195		1200
Ser Arg Glu Ser Trp Trp Pro Pro Phe Ser Thr Val Met Glu Gly				
1205		1210		1215
Leu Leu Pro Ser Gln Arg Pro Thr Thr Ser Glu Thr Gly Thr Pro				
1220		1225		1230
Arg Val Glu Gly Met Val Thr Glu Lys Pro Ala Asn Thr Leu Leu				
1235		1240		1245
Pro Leu Gly Gly Asp His Gln Pro Glu Pro Ser Gly Lys Thr Ala				
1250		1255		1260
Asn Arg Asn His Leu Lys Leu Pro Asn Asn Met Asn Gln Thr Lys				
1265		1270		1275
Ser Ser Glu Pro Val Leu Thr Glu Glu Asp Ala Thr Ser Leu Ile				
1280		1285		1290
Thr Glu Gly Phe Leu Leu Asn Ala Ser Asn Tyr Lys Gln Leu Thr				
1295		1300		1305
Asn Gly His Gly Ser Ala His Trp Ile Val Gly Asn Trp Ser Glu				
1310		1315		1320
Cys Ser Thr Thr Cys Gly Leu Gly Ala Tyr Trp Lys Arg Val Glu				
1325		1330		1335
Cys Thr Thr Gln Met Asp Ser Asp Cys Ala Ala Ile Gln Arg Pro				
1340		1345		1350
Asp Pro Ala Lys Arg Cys His Leu Arg Pro Cys Ala Gly Trp Lys				
1355		1360		1365

Val Gly Asn Trp Ser Lys Cys Ser Arg Asn Cys Ser Gly Gly Phe  
1370 1375 1380

Lys Ile Arg Glu Ile Gln Cys Val Asp Ser Arg Asp His Arg Asn  
1385 1390 1395

Leu Arg Pro Phe His Cys Gln Phe Leu Ala Gly Ile Pro Pro Pro  
1400 1405 1410

Leu Ser Met Ser Cys Asn Pro Glu Pro Cys Glu Ala Trp Gln Val  
1415 1420 1425

Glu Pro Trp Ser Gln Cys Ser Arg Ser Cys Gly Gly Gly Val Gln  
1430 1435 1440

Glu Arg Gly Val Phe Cys Pro Gly Gly Leu Cys Asp Trp Thr Lys  
1445 1450 1455

Arg Pro Thr Ser Thr Met Ser Cys Asn Glu His Leu Cys Cys His  
1460 1465 1470

Trp Ala Thr Gly Asn Trp Asp Leu Cys Ser Thr Ser Cys Gly Gly  
1475 1480 1485

Gly Phe Gln Lys Arg Ile Val Gln Cys Val Pro Ser Glu Gly Asn  
1490 1495 1500

Lys Thr Glu Asp Gln Asp Gln Cys Leu Cys Asp His Lys Pro Arg  
1505 1510 1515

Pro Pro Glu Phe Lys Lys Cys Asn Gln Gln Ala Cys Lys Lys Ser  
1520 1525 1530

Ala Asp Leu Leu Cys Thr Lys Asp Lys Leu Ser Ala Ser Phe Cys  
1535 1540 1545

Gln Thr Leu Lys Ala Met Lys Lys Cys Ser Val Pro  
1550 1555 1560

<210> 90

<211> 96

<212> PRT

<213> Homo Sapiens

<400> 90

Met Cys Cys Thr Lys Ser Leu Leu Leu Ala Ala Leu Met Ser Val Leu  
1 5 10 15

Leu Leu His Leu Cys Gly Glu Ser Glu Ala Ala Ser Asn Phe Asp Cys  
20 25 30

Cys Leu Gly Tyr Thr Asp Arg Ile Leu His Pro Lys Phe Ile Val Gly  
35 40 45

Phe Thr Arg Gln Leu Ala Asn Glu Gly Cys Asp Ile Asn Ala Ile Ile  
50 55 60

Phe His Thr Lys Lys Lys Leu Ser Val Cys Ala Asn Pro Lys Gln Thr  
65 70 75 80

Trp Val Lys Tyr Ile Val Arg Leu Leu Ser Lys Lys Val Lys Asn Met  
85 90 95

<210> 91

<211> 336

<212> PRT

<213> Homo Sapiens

<400> 91

Met Leu Gln Ser Leu Ala Gly Ser Ser Cys Val Arg Leu Val Glu Arg  
1 5 10 15

His Arg Ser Ala Trp Cys Phe Gly Phe Leu Val Leu Gly Tyr Leu Leu  
20 25 30

Tyr Leu Val Phe Gly Ala Val Val Phe Ser Ser Val Glu Leu Pro Tyr  
35 40 45

Glu Asp Leu Leu Arg Gln Glu Leu Arg Lys Leu Lys Arg Arg Phe Leu  
50 55 60

Glu Glu His Glu Cys Leu Ser Glu Gln Gln Leu Glu Gln Phe Leu Gly  
65 70 75 80

Arg Val Leu Glu Ala Ser Asn Tyr Gly Val Ser Val Leu Ser Asn Ala  
85 90 95

Ser Gly Asn Trp Asn Trp Asp Phe Thr Ser Ala Leu Phe Phe Ala Ser  
100 105 110

Thr Val Leu Ser Thr Thr Gly Tyr Gly His Thr Val Pro Leu Ser Asp  
115 120 125

Gly Gly Lys Ala Phe Cys Ile Ile Tyr Ser Val Ile Gly Ile Pro Phe  
 130 135 140

Thr Leu Leu Phe Leu Thr Ala Val Val Gln Arg Ile Thr Val His Val  
 145 150 155 160

Thr Arg Arg Pro Val Leu Tyr Phe His Ile Arg Trp Gly Phe Ser Lys  
 165 170 175

Gln Val Val Ala Ile Val His Ala Val Leu Leu Gly Phe Val Thr Val  
 180 185 190

Ser Cys Phe Phe Phe Ile Pro Ala Ala Val Phe Ser Val Leu Glu Asp  
 195 200 205

Asp Trp Asn Phe Leu Glu Ser Phe Tyr Phe Cys Phe Ile Ser Leu Ser  
 210 215 220

Thr Ile Gly Leu Gly Asp Tyr Val Pro Gly Glu Gly Tyr Asn Gln Lys  
 225 230 235 240

Phe Arg Glu Leu Tyr Lys Ile Gly Ile Thr Cys Tyr Leu Leu Leu Gly  
 245 250 255

Leu Ile Ala Met Leu Val Val Leu Glu Thr Phe Cys Glu Leu His Glu  
 260 265 270

Leu Lys Lys Phe Arg Lys Met Phe Tyr Val Lys Lys Asp Lys Asp Glu  
 275 280 285

Asp Gln Val His Ile Ile Glu His Asp Gln Leu Ser Phe Ser Ser Ile  
 290 295 300

Thr Asp Gln Ala Ala Gly Met Lys Glu Asp Gln Lys Gln Asn Glu Pro  
 305 310 315 320

Phe Val Ala Thr Gln Ser Ser Ala Cys Val Asp Gly Pro Ala Asn His  
 325 330 335

<210> 92  
 <211> 103  
 <212> PRT  
 <213> Homo Sapiens

<400> 92

Met Glu Thr Thr Asn Gly Thr Glu Thr Trp Tyr Glu Ser Leu His Ala  
 1 5 10 15

Val Leu Lys Ala Leu Asn Ala Thr Leu His Ser Asn Leu Leu Cys Arg  
 20 25 30

Pro Gly Pro Gly Leu Gly Pro Asp Asn Gln Thr Glu Glu Arg Arg Ala  
 35 40 45

Ser Leu Pro Gly Arg Asp Asp Asn Ser Tyr Met Tyr Ile Leu Phe Val  
 50 55 60

Met Phe Leu Phe Ala Val Thr Val Gly Ser Leu Ile Leu Gly Tyr Thr  
 65 70 75 80

Arg Ser Arg Lys Val Asp Lys Arg Ser Asp Pro Tyr His Val Tyr Ile  
 85 90 95

Lys Asn Arg Val Ser Met Ile  
 100

<210> 93  
 <211> 4590  
 <212> PRT  
 <213> Homo Sapiens

<400> 93

Met Gly Arg His Leu Ala Leu Leu Leu Leu Leu Leu Leu Phe Gln  
 1 5 10 15

His Phe Gly Asp Ser Asp Gly Ser Gln Arg Leu Glu Gln Thr Pro Leu  
 20 25 30

Gln Phe Thr His Leu Glu Tyr Asn Val Thr Val Gln Glu Asn Ser Ala  
 35 40 45

Ala Lys Thr Tyr Val Gly His Pro Val Lys Met Gly Val Tyr Ile Thr  
 50 55 60

His Pro Ala Trp Glu Val Arg Tyr Lys Ile Val Ser Gly Asp Ser Glu  
 65 70 75 80

Asn Leu Phe Lys Ala Glu Glu Tyr Ile Leu Gly Asp Phe Cys Phe Leu  
 85 90 95

Arg Ile Arg Thr Lys Gly Gly Asn Thr Ala Ile Leu Asn Arg Glu Val  
 100 105 110

Lys Asp His Tyr Thr Leu Ile Val Lys Ala Leu Glu Lys Asn Thr Asn  
 115 120 125

Val Glu Ala Arg Thr Lys Val Arg Val Gln Val Leu Asp Thr Asn Asp  
 130 135 140

Leu Arg Pro Leu Phe Ser Pro Thr Ser Tyr Ser Val Ser Leu Pro Glu  
 145 150 155 160

Asn Thr Ala Ile Arg Thr Ser Ile Ala Arg Val Ser Ala Thr Asp Ala  
 165 170 175

Asp Ile Gly Thr Asn Gly Glu Phe Tyr Tyr Ser Phe Lys Asp Arg Thr  
 180 185 190

Asp Met Phe Ala Ile His Pro Thr Ser Gly Val Ile Val Leu Thr Gly  
 195 200 205

Arg Leu Asp Tyr Leu Glu Thr Lys Leu Tyr Glu Met Glu Ile Leu Ala  
 210 215 220

Ala Asp Arg Gly Met Lys Leu Tyr Gly Ser Ser Gly Ile Ser Ser Met  
 225 230 235 240

Ala Lys Leu Thr Val His Ile Glu Gln Ala Asn Glu Cys Ala Pro Val  
 245 250 255

Ile Thr Ala Val Thr Leu Ser Pro Ser Glu Leu Asp Arg Asp Pro Ala  
 260 265 270

Tyr Ala Ile Val Thr Val Asp Asp Cys Asp Gln Gly Ala Asn Gly Asp  
 275 280 285

Ile Ala Ser Leu Ser Ile Val Ala Gly Asp Leu Leu Gln Gln Phe Arg  
 290 295 300

Thr Val Arg Ser Phe Pro Gly Ser Lys Glu Tyr Lys Val Lys Ala Ile  
 305 310 315 320

Gly Asp Ile Asp Trp Asp Ser His Pro Phe Gly Tyr Asn Leu Thr Leu  
 325 330 335

Gln Ala Lys Asp Lys Gly Thr Pro Pro Gln Phe Ser Ser Val Lys Val  
 340 345 350

Ile His Val Thr Ser Pro Gln Phe Lys Ala Gly Pro Val Lys Phe Glu  
 355 360 365

Lys Asp Val Tyr Arg Ala Glu Ile Ser Glu Phe Ala Pro Pro Asn Thr  
 370 375 380

Pro Val Val Met Val Lys Ala Ile Pro Ala Tyr Ser His Leu Arg Tyr  
 385 390 395 400

Val Phe Lys Arg Thr Pro Gly Lys Ala Lys Phe Ser Leu Asn Tyr Asn  
 405 410 415

Thr Gly Leu Ile Ser Ile Leu Glu Pro Val Lys Arg Gln Gln Ala Ala  
 420 425 430

His Phe Glu Leu Glu Val Thr Thr Ser Asp Arg Lys Ala Ser Thr Lys  
 435 440 445

Val Leu Val Lys Val Leu Gly Ala Asn Ser Asn Pro Pro Glu Phe Thr  
 450 455 460

Gln Thr Ala Tyr Lys Ala Ala Phe Asp Glu Asn Val Pro Ile Gly Thr  
 465 470 475 480

Thr Ile Met Ser Leu Ser Ala Val Asp Pro Asp Glu Gly Glu Asn Gly  
 485 490 495

Tyr Val Thr Tyr Ser Ile Ala Asn Leu Asn His Val Pro Phe Ala Ile  
 500 505 510

Asp His Phe Thr Gly Ala Val Ser Thr Ser Glu Asn Leu Asp Tyr Glu  
 515 520 525

Leu Met Pro Arg Val Tyr Thr Leu Arg Ile Arg Ala Ser Asp Trp Gly  
 530 535 540

Leu Pro Tyr Arg Arg Glu Val Glu Val Leu Ala Thr Ile Thr Leu Asn  
 545 550 555 560

Asn Leu Asn Asp Asn Thr Pro Leu Phe Glu Lys Ile Asn Cys Glu Gly  
 565 570 575

Thr Ile Pro Arg Asp Leu Gly Val Gly Glu Gln Ile Thr Thr Val Ser  
 580 585 590

Ala Ile Asp Ala Asp Glu Leu Gln Leu Val Gln Tyr Gln Ile Glu Ala  
 595 600 605

Gly Asn Glu Leu Asp Leu Phe Ser Leu Asn Pro Asn Ser Gly Val Leu  
 610 615 620

Ser Leu Lys Arg Ser Leu Met Asp Gly Leu Gly Ala Lys Val Ser Phe  
 625 630 635 640

His Ser Leu Arg Ile Thr Ala Thr Asp Gly Glu Asn Phe Ala Thr Pro  
 645 650 655

Leu Tyr Ile Asn Ile Thr Val Ala Ala Ser His Lys Leu Val Asn Leu  
 660 665 670

Gln Cys Glu Glu Thr Gly Val Ala Lys Met Leu Ala Glu Lys Leu Leu  
 675 680 685

Gln Ala Asn Lys Leu His Asn Gln Gly Glu Val Glu Asp Ile Phe Phe  
 690 695 700

Asp Ser His Ser Val Asn Ala His Ile Pro Gln Phe Arg Ser Thr Leu  
 705 710 715 720

Pro Thr Gly Ile Gln Val Lys Glu Asn Gln Pro Val Gly Ser Ser Val  
 725 730 735

Ile Phe Met Asn Ser Thr Asp Leu Asp Thr Gly Phe Asn Gly Lys Leu  
 740 745 750

Val Tyr Ala Val Ser Gly Gly Asn Glu Asp Ser Cys Phe Met Ile Asp  
 755 760 765

Met Glu Thr Gly Met Leu Lys Ile Leu Ser Pro Leu Asp Arg Glu Thr  
 770 775 780

Thr Asp Lys Tyr Thr Leu Asn Ile Thr Val Tyr Asp Leu Gly Ile Pro  
 785 790 795 800

Gln Lys Ala Ala Trp Arg Leu Leu His Val Val Val Val Asp Ala Asn  
 805 810 815

Asp Asn Pro Pro Glu Phe Leu Gln Glu Ser Tyr Phe Val Glu Val Ser  
 820 825 830

Glu Asp Lys Glu Val His Ser Glu Ile Ile Gln Val Glu Ala Thr Asp



835		840		845
Lys Asp Leu Gly Pro Asn Gly His Val Thr Tyr Ser Ile Leu Thr Asp				
850		855		860
Thr Asp Thr Phe Ser Ile Asp Ser Val Thr Gly Val Val Asn Ile Ala				
865		870		875
				880
Arg Pro Leu Asp Arg Glu Leu Gln His Glu His Ser Leu Lys Ile Glu				
		885		890
				895
Ala Arg Asp Gln Ala Arg Glu Glu Pro Gln Leu Phe Ser Thr Val Val				
		900		905
				910
Val Lys Val Ser Leu Glu Asp Val Asn Asp Asn Pro Pro Thr Phe Ile				
		915		920
				925
Pro Pro Asn Tyr Arg Val Lys Val Arg Glu Asp Leu Pro Glu Gly Thr				
		930		935
				940
Val Ile Met Trp Leu Glu Ala His Asp Pro Asp Leu Gly Gln Ser Gly				
945		950		955
				960
Gln Val Arg Tyr Ser Leu Leu Asp His Gly Glu Gly Asn Phe Asp Val				
		965		970
				975
Asp Lys Leu Ser Gly Ala Val Arg Ile Val Gln Gln Leu Asp Phe Glu				
		980		985
				990
Lys Lys Gln Val Tyr Asn Leu Thr Val Arg Ala Lys Asp Lys Gly Lys				
		995		1000
				1005
Pro Val Ser Leu Ser Ser Thr Cys Tyr Val Glu Val Glu Val Val				
		1010		1015
				1020
Asp Val Asn Glu Asn Leu His Pro Pro Val Phe Ser Ser Phe Val				
		1025		1030
				1035
Glu Lys Gly Thr Val Lys Glu Asp Ala Pro Val Gly Ser Leu Val				
		1040		1045
				1050
Met Thr Val Ser Ala His Asp Glu Asp Ala Gly Arg Asp Gly Glu				
		1055		1060
				1065
Ile Arg Tyr Ser Ile Arg Asp Gly Ser Gly Val Gly Val Phe Lys				
		1070		1075
				1080

Ile	Gly	Glu	Glu	Thr	Gly	Val	Ile	Glu	Thr	Ser	Asp	Arg	Leu	Asp
1085						1090					1095			
Arg	Glu	Ser	Thr	Ser	His	Tyr	Trp	Leu	Thr	Val	Phe	Ala	Thr	Asp
1100						1105					1110			
Gln	Gly	Val	Val	Pro	Leu	Ser	Ser	Phe	Ile	Glu	Ile	Tyr	Ile	Glu
1115						1120					1125			
Val	Glu	Asp	Val	Asn	Asp	Asn	Ala	Pro	Gln	Thr	Ser	Glu	Pro	Val
1130						1135					1140			
Tyr	Tyr	Pro	Glu	Ile	Met	Glu	Asn	Ser	Pro	Lys	Asp	Val	Ser	Val
1145						1150					1155			
Val	Gln	Ile	Glu	Ala	Phe	Asp	Pro	Asp	Ser	Ser	Ser	Asn	Asp	Lys
1160						1165					1170			
Leu	Met	Tyr	Lys	Ile	Thr	Ser	Gly	Asn	Pro	Gln	Gly	Phe	Phe	Ser
1175						1180					1185			
Ile	His	Pro	Lys	Thr	Gly	Leu	Ile	Thr	Thr	Thr	Ser	Arg	Lys	Leu
1190						1195					1200			
Asp	Arg	Glu	Gln	Gln	Asp	Glu	His	Ile	Leu	Glu	Val	Thr	Val	Thr
1205						1210					1215			
Asp	Asn	Gly	Ser	Pro	Pro	Lys	Ser	Thr	Ile	Ala	Arg	Val	Ile	Val
1220						1225					1230			
Lys	Ile	Leu	Asp	Glu	Asn	Asp	Asn	Lys	Pro	Gln	Phe	Leu	Gln	Lys
1235						1240					1245			
Phe	Tyr	Lys	Ile	Arg	Leu	Pro	Glu	Arg	Glu	Lys	Pro	Asp	Arg	Glu
1250						1255					1260			
Arg	Asn	Ala	Arg	Arg	Glu	Pro	Leu	Tyr	Arg	Val	Ile	Ala	Thr	Asp
1265						1270					1275			
Lys	Asp	Glu	Gly	Pro	Asn	Ala	Glu	Ile	Ser	Tyr	Ser	Ile	Glu	Asp
1280						1285					1290			
Gly	Asn	Glu	His	Gly	Lys	Phe	Phe	Ile	Glu	Pro	Lys	Thr	Gly	Val
1295						1300					1305			

Val	Ser	Ser	Lys	Arg	Phe	Ser	Ala	Ala	Gly	Glu	Tyr	Asp	Ile	Leu
1310						1315					1320			
Ser	Ile	Lys	Ala	Val	Asp	Asn	Gly	Arg	Pro	Gln	Lys	Ser	Ser	Thr
1325						1330					1335			
Thr	Arg	Leu	His	Ile	Glu	Trp	Ile	Ser	Lys	Pro	Lys	Gln	Ser	Leu
1340						1345					1350			
Glu	Pro	Ile	Ser	Phe	Glu	Glu	Ser	Phe	Phe	Thr	Phe	Thr	Val	Met
1355						1360					1365			
Glu	Ser	Asp	Pro	Val	Ala	His	Met	Ile	Gly	Val	Ile	Ser	Val	Glu
1370						1375					1380			
Pro	Pro	Gly	Ile	Pro	Leu	Trp	Phe	Asp	Ile	Thr	Gly	Gly	Asn	Tyr
1385						1390					1395			
Asp	Ser	His	Phe	Asp	Val	Asp	Lys	Gly	Thr	Gly	Thr	Ile	Ile	Val
1400						1405					1410			
Ala	Lys	Pro	Leu	Asp	Ala	Glu	Gln	Lys	Ser	Asn	Tyr	Asn	Leu	Thr
1415						1420					1425			
Val	Glu	Ala	Thr	Asp	Gly	Thr	Thr	Thr	Ile	Leu	Thr	Gln	Val	Phe
1430						1435					1440			
Ile	Lys	Val	Ile	Asp	Thr	Asn	Asp	His	Arg	Pro	Gln	Phe	Ser	Thr
1445						1450					1455			
Ser	Lys	Tyr	Glu	Val	Val	Ile	Pro	Glu	Asp	Thr	Ala	Pro	Glu	Thr
1460						1465					1470			
Glu	Ile	Leu	Gln	Ile	Ser	Ala	Val	Asp	Gln	Asp	Glu	Lys	Asn	Lys
1475						1480					1485			
Leu	Ile	Tyr	Thr	Leu	Gln	Ser	Ser	Arg	Asp	Pro	Leu	Ser	Leu	Lys
1490						1495					1500			
Lys	Phe	Arg	Leu	Asp	Pro	Ala	Thr	Gly	Ser	Leu	Tyr	Thr	Ser	Glu
1505						1510					1515			
Lys	Leu	Asp	His	Glu	Ala	Val	Ser	Pro	Ala	His	Leu	Thr	Val	Met
1520						1525					1530			

Val	Arg	Asp	Gln	Asp	Val	Pro	Val	Lys	Arg	Asn	Phe	Ala	Arg	Ile
1535						1540					1545			
Val	Val	Asn	Val	Ser	Asp	Thr	Asn	Asp	His	Ala	Pro	Trp	Phe	Thr
1550						1555					1560			
Ala	Ser	Ser	Tyr	Lys	Gly	Arg	Val	Tyr	Glu	Ser	Ala	Ala	Val	Gly
1565						1570					1575			
Ser	Val	Val	Leu	Gln	Val	Thr	Ala	Leu	Asp	Lys	Asp	Lys	Gly	Lys
1580						1585					1590			
Asn	Ala	Glu	Val	Leu	Tyr	Ser	Ile	Glu	Ser	Gly	Asn	Ile	Gly	Asn
1595						1600					1605			
Ile	Gly	Asn	Ser	Phe	Met	Ile	Asp	Pro	Val	Leu	Gly	Ser	Ile	Lys
1610						1615					1620			
Thr	Ala	Lys	Glu	Leu	Asp	Arg	Ser	Asn	Gln	Ala	Glu	Tyr	Asp	Leu
1625						1630					1635			
Met	Val	Lys	Ala	Thr	Asp	Lys	Gly	Ser	Pro	Pro	Met	Ser	Glu	Ile
1640						1645					1650			
Thr	Ser	Val	Arg	Ile	Phe	Val	Thr	Ile	Ala	Asp	Asn	Ala	Ser	Pro
1655						1660					1665			
Lys	Phe	Thr	Ser	Lys	Glu	Tyr	Ser	Val	Glu	Leu	Ser	Glu	Thr	Val
1670						1675					1680			
Ser	Ile	Gly	Ser	Phe	Val	Gly	Met	Val	Thr	Ala	His	Ser	Gln	Ser
1685						1690					1695			
Ser	Val	Val	Tyr	Glu	Ile	Lys	Asp	Gly	Asn	Thr	Gly	Asp	Ala	Phe
1700						1705					1710			
Asp	Ile	Asn	Pro	His	Ser	Gly	Thr	Ile	Ile	Thr	Gln	Lys	Ala	Leu
1715						1720					1725			
Asp	Phe	Glu	Thr	Leu	Pro	Ile	Tyr	Thr	Leu	Ile	Ile	Gln	Gly	Thr
1730						1735					1740			
Asn	Met	Ala	Gly	Leu	Ser	Thr	Asn	Thr	Thr	Val	Leu	Val	His	Leu
1745						1750					1755			
Gln	Asp	Glu	Asn	Asp	Asn	Ala	Pro	Val	Phe	Met	Gln	Ala	Glu	Tyr

1760		1765		1770
Thr Gly Leu Ile Ser Glu Ser Ala Ser Ile Asn Ser Val Val Leu	1775	1780		1785
Thr Asp Arg Asn Val Pro Leu Val Ile Arg Ala Ala Asp Ala Asp	1790	1795		1800
Lys Asp Ser Asn Ala Leu Leu Val Tyr His Ile Val Glu Pro Ser	1805	1810		1815
Val His Thr Tyr Phe Ala Ile Asp Ser Ser Thr Gly Ala Ile His	1820	1825		1830
Thr Val Leu Ser Leu Asp Tyr Glu Glu Thr Ser Ile Phe His Phe	1835	1840		1845
Thr Val Gln Val His Asp Met Gly Thr Pro Arg Leu Phe Ala Glu	1850	1855		1860
Tyr Ala Ala Asn Val Thr Val His Val Ile Asp Ile Asn Asp Cys	1865	1870		1875
Pro Pro Val Phe Ala Lys Pro Leu Tyr Glu Ala Ser Leu Leu Leu	1880	1885		1890
Pro Thr Tyr Lys Gly Val Lys Val Ile Thr Val Asn Ala Thr Asp	1895	1900		1905
Ala Asp Ser Ser Ala Phe Ser Gln Leu Ile Tyr Ser Ile Thr Glu	1910	1915		1920
Gly Asn Ile Gly Glu Lys Phe Ser Met Asp Tyr Lys Thr Gly Ala	1925	1930		1935
Leu Thr Val Gln Asn Thr Thr Gln Leu Arg Ser Arg Tyr Glu Leu	1940	1945		1950
Thr Val Arg Ala Ser Asp Gly Arg Phe Ala Gly Leu Thr Ser Val	1955	1960		1965
Lys Ile Asn Val Lys Glu Ser Lys Glu Ser His Leu Lys Phe Thr	1970	1975		1980
Gln Asp Val Tyr Ser Ala Val Val Lys Glu Asn Ser Thr Glu Ala	1985	1990		1995

Glu Thr	Leu Ala Val Ile Thr	Ala Ile Gly Ser Pro	Ile Asn Glu
2000	2005	2010	
Pro Leu	Phe Tyr His Ile Leu	Asn Pro Asp Arg Arg	Phe Lys Ile
2015	2020	2025	
Ser Arg	Thr Ser Gly Val Leu	Ser Thr Thr Gly Thr	Pro Phe Asp
2030	2035	2040	
Arg Glu	Gln Gln Glu Ala Phe	Asp Val Val Val Glu	Val Ile Glu
2045	2050	2055	
Glu His	Lys Pro Ser Ala Val	Ala His Val Val Val	Lys Val Ile
2060	2065	2070	
Val Glu	Asp Gln Asn Asp Asn	Ala Pro Val Phe Val	Asn Leu Pro
2075	2080	2085	
Tyr Tyr	Ala Val Val Lys Val	Asp Thr Glu Val Gly	His Val Ile
2090	2095	2100	
Arg Tyr	Val Thr Ala Val Asp	Arg Asp Ser Gly Arg	Asn Gly Glu
2105	2110	2115	
Val His	Tyr Tyr Leu Lys Glu	His His Glu His Phe	Gln Ile Gly
2120	2125	2130	
Pro Leu	Gly Glu Ile Ser Leu	Lys Lys Gln Phe Glu	Leu Asp Thr
2135	2140	2145	
Leu Asn	Lys Glu Tyr Leu Val	Thr Val Val Ala Lys	Asp Gly Gly
2150	2155	2160	
Asn Pro	Ala Phe Ser Ala Glu	Val Ile Val Pro Ile	Thr Val Met
2165	2170	2175	
Asn Lys	Ala Met Pro Val Phe	Glu Lys Pro Phe Tyr	Ser Ala Glu
2180	2185	2190	
Ile Ala	Glu Ser Ile Gln Val	His Ser Pro Val Val	His Val Gln
2195	2200	2205	
Ala Asn	Ser Pro Glu Gly Leu	Lys Val Phe Tyr Ser	Ile Thr Asp
2210	2215	2220	

Gly	Asp	Pro	Phe	Ser	Gln	Phe	Thr	Ile	Asn	Phe	Asn	Thr	Gly	Val
2225						2230					2235			
Ile	Asn	Val	Ile	Ala	Pro	Leu	Asp	Phe	Glu	Ala	His	Pro	Ala	Tyr
2240						2245					2250			
Lys	Leu	Ser	Ile	Arg	Ala	Thr	Asp	Ser	Leu	Thr	Gly	Ala	His	Ala
2255						2260					2265			
Glu	Val	Phe	Val	Asp	Ile	Ile	Val	Asp	Asp	Ile	Asn	Asp	Asn	Pro
2270						2275					2280			
Pro	Val	Phe	Ala	Gln	Gln	Ser	Tyr	Ala	Val	Thr	Leu	Ser	Glu	Ala
2285						2290					2295			
Ser	Val	Ile	Gly	Thr	Ser	Val	Val	Gln	Val	Arg	Ala	Thr	Asp	Ser
2300						2305					2310			
Asp	Ser	Glu	Pro	Asn	Arg	Gly	Ile	Ser	Tyr	Gln	Met	Phe	Gly	Asn
2315						2320					2325			
His	Ser	Lys	Ser	His	Asp	His	Phe	His	Val	Asp	Ser	Ser	Thr	Gly
2330						2335					2340			
Leu	Ile	Ser	Leu	Leu	Arg	Thr	Leu	Asp	Tyr	Glu	Gln	Ser	Arg	Gln
2345						2350					2355			
His	Thr	Ile	Phe	Val	Arg	Ala	Val	Asp	Gly	Gly	Met	Pro	Thr	Leu
2360						2365					2370			
Ser	Ser	Asp	Val	Ile	Val	Thr	Val	Asp	Val	Thr	Asp	Leu	Asn	Gly
2375						2380					2385			
Asn	Pro	Pro	Leu	Phe	Glu	Gln	Gln	Ile	Tyr	Glu	Ala	Arg	Ile	Ser
2390						2395					2400			
Glu	His	Ala	Pro	His	Gly	His	Phe	Val	Thr	Cys	Val	Lys	Ala	Tyr
2405						2410					2415			
Asp	Ala	Asp	Ser	Ser	Asp	Ile	Asp	Lys	Leu	Gln	Tyr	Ser	Ile	Leu
2420						2425					2430			
Ser	Gly	Asn	Asp	His	Lys	His	Phe	Val	Ile	Asp	Ser	Ala	Thr	Gly
2435						2440					2445			

Ile	Ile	Thr	Leu	Ser	Asn	Leu	His	Arg	His	Ala	Leu	Lys	Pro	Phe
2450						2455					2460			
Tyr	Ser	Leu	Asn	Leu	Ser	Val	Ser	Asp	Gly	Val	Phe	Arg	Ser	Ser
2465						2470					2475			
Thr	Gln	Val	His	Val	Thr	Val	Ile	Gly	Gly	Asn	Leu	His	Ser	Pro
2480						2485					2490			
Ala	Phe	Leu	Gln	Asn	Glu	Tyr	Glu	Val	Glu	Leu	Ala	Glu	Asn	Ala
2495						2500					2505			
Pro	Leu	His	Thr	Leu	Val	Met	Glu	Val	Lys	Thr	Thr	Asp	Gly	Asp
2510						2515					2520			
Ser	Gly	Ile	Tyr	Gly	His	Val	Thr	Tyr	His	Ile	Val	Asn	Asp	Phe
2525						2530					2535			
Ala	Lys	Asp	Arg	Phe	Tyr	Ile	Asn	Glu	Arg	Gly	Gln	Ile	Phe	Thr
2540						2545					2550			
Leu	Glu	Lys	Leu	Asp	Arg	Glu	Thr	Pro	Ala	Glu	Lys	Val	Ile	Ser
2555						2560					2565			
Val	Arg	Leu	Met	Ala	Lys	Asp	Ala	Gly	Gly	Lys	Val	Ala	Phe	Cys
2570						2575					2580			
Thr	Val	Asn	Val	Ile	Leu	Thr	Asp	Asp	Asn	Asp	Asn	Ala	Pro	Gln
2585						2590					2595			
Phe	Arg	Ala	Thr	Lys	Tyr	Glu	Val	Asn	Ile	Gly	Ser	Ser	Ala	Ala
2600						2605					2610			
Lys	Gly	Thr	Ser	Val	Val	Lys	Ser	Ala	Ser	Asp	Ala	Asp	Glu	Gly
2615						2620					2625			
Ser	Asn	Ala	Asp	Ile	Thr	Tyr	Ala	Ile	Glu	Ala	Asp	Ser	Glu	Ser
2630						2635					2640			
Val	Lys	Glu	Asn	Leu	Glu	Ile	Asn	Lys	Leu	Ser	Gly	Val	Ile	Thr
2645						2650					2655			
Thr	Lys	Glu	Ser	Leu	Ile	Gly	Leu	Glu	Asn	Glu	Phe	Phe	Thr	Phe
2660						2665					2670			
Phe	Val	Arg	Ala	Val	Asp	Asn	Gly	Ser	Pro	Ser	Lys	Glu	Ser	Val



2675		2680		2685
Val Leu	Val Tyr Val Lys	Ile Leu Pro Pro Glu Met	Gln Leu Pro	
2690		2695	2700	
Lys Phe	Ser Glu Pro Phe Tyr	Thr Phe Thr Val Ser	Glu Asp Val	
2705		2710	2715	
Pro Val	Gly Thr Glu Ile Asp	Leu Ile Arg Ala Glu	His Ser Gly	
2720		2725	2730	
Thr Val	Leu Tyr Ser Leu Val	Lys Gly Asn Thr Pro	Glu Ser Asn	
2735		2740	2745	
Arg Asp	Glu Ser Phe Val Ile	Asp Arg Gln Ser Gly	Arg Leu Lys	
2750		2755	2760	
Leu Glu	Lys Ser Leu Asp His	Glu Thr Thr Lys Trp	Tyr Gln Phe	
2765		2770	2775	
Ser Ile	Leu Ala Arg Cys Thr	Gln Asp Asp His Glu	Met Val Ala	
2780		2785	2790	
Ser Val	Asp Val Ser Ile Gln	Val Lys Asp Ala Asn	Asp Asn Ser	
2795		2800	2805	
Pro Val	Phe Glu Ser Ser Pro	Tyr Glu Ala Phe Ile	Val Glu Asn	
2810		2815	2820	
Leu Pro	Gly Gly Ser Arg Val	Ile Gln Ile Arg Ala	Ser Asp Ala	
2825		2830	2835	
Asp Ser	Gly Thr Asn Gly Gln	Val Met Tyr Ser Leu	Asp Gln Ser	
2840		2845	2850	
Gln Ser	Val Glu Val Ile Glu	Ser Phe Ala Ile Asn	Met Glu Thr	
2855		2860	2865	
Gly Trp	Ile Thr Thr Leu Lys	Glu Leu Asp His Glu	Lys Arg Asp	
2870		2875	2880	
Asn Tyr	Gln Ile Lys Val Val	Ala Ser Asp His Gly	Glu Lys Ile	
2885		2890	2895	
Gln Leu	Ser Ser Thr Ala Ile	Val Asp Val Thr Val	Thr Asp Val	
2900		2905	2910	

Asn	Asp	Ser	Pro	Pro	Arg	Phe	Thr	Ala	Glu	Ile	Tyr	Lys	Gly	Thr
2915						2920					2925			
Val	Ser	Glu	Asp	Asp	Pro	Gln	Gly	Gly	Val	Ile	Ala	Ile	Leu	Ser
2930						2935					2940			
Thr	Thr	Asp	Ala	Asp	Ser	Glu	Glu	Ile	Asn	Arg	Gln	Val	Thr	Tyr
2945						2950					2955			
Phe	Ile	Thr	Gly	Gly	Asp	Pro	Leu	Gly	Gln	Phe	Ala	Val	Glu	Thr
2960						2965					2970			
Ile	Gln	Asn	Glu	Trp	Lys	Val	Tyr	Val	Lys	Lys	Pro	Leu	Asp	Arg
2975						2980					2985			
Glu	Lys	Arg	Asp	Asn	Tyr	Leu	Leu	Thr	Ile	Thr	Ala	Thr	Asp	Gly
2990						2995					3000			
Thr	Phe	Ser	Ser	Lys	Ala	Ile	Val	Glu	Val	Lys	Val	Leu	Asp	Ala
3005						3010					3015			
Asn	Asp	Asn	Ser	Pro	Val	Cys	Glu	Lys	Thr	Leu	Tyr	Ser	Asp	Thr
3020						3025					3030			
Ile	Pro	Glu	Asp	Val	Leu	Pro	Gly	Lys	Leu	Ile	Met	Gln	Ile	Ser
3035						3040					3045			
Ala	Thr	Asp	Ala	Asp	Ile	Arg	Ser	Asn	Ala	Glu	Ile	Thr	Tyr	Thr
3050						3055					3060			
Leu	Leu	Gly	Ser	Gly	Ala	Glu	Lys	Phe	Lys	Leu	Asn	Pro	Asp	Thr
3065						3070					3075			
Gly	Glu	Leu	Lys	Thr	Ser	Thr	Pro	Leu	Asp	Arg	Glu	Glu	Gln	Ala
3080						3085					3090			
Val	Tyr	His	Leu	Leu	Val	Arg	Ala	Thr	Asp	Gly	Gly	Gly	Arg	Phe
3095						3100					3105			
Cys	Gln	Ala	Ser	Ile	Val	Val	Thr	Leu	Glu	Asp	Val	Asn	Asp	Asn
3110						3115					3120			
Ala	Pro	Glu	Phe	Ser	Ala	Asp	Pro	Tyr	Ala	Ile	Thr	Val	Phe	Glu
3125						3130					3135			

Asn Thr	Glu Pro Gly Thr	Leu	Leu Thr Arg Val	Gln	Ala Thr Asp
3140		3145		3150	
Ala Asp	Ala Gly Leu Asn Arg	Lys Ile Leu Tyr	Ser	Leu Ile Asp	
3155		3160		3165	
Ser Ala	Asp Gly Gln Phe Ser	Ile Asn Glu Leu	Ser	Gly Ile Ile	
3170		3175		3180	
Gln Leu	Glu Lys Pro Leu Asp	Arg Glu Leu Gln	Ala	Val Tyr Thr	
3185		3190		3195	
Leu Ser	Leu Lys Ala Val Asp	Gln Gly Leu Pro	Arg	Arg Leu Thr	
3200		3205		3210	
Ala Thr	Gly Thr Val Ile Val	Ser Val Leu Asp	Ile	Asn Asp Asn	
3215		3220		3225	
Pro Pro	Val Phe Glu Tyr Arg	Glu Tyr Gly Ala	Thr	Val Ser Glu	
3230		3235		3240	
Asp Ile	Leu Val Gly Thr Glu	Val Leu Gln Val	Tyr	Ala Ala Ser	
3245		3250		3255	
Arg Asp	Ile Glu Ala Asn Ala	Glu Ile Thr Tyr	Ser	Ile Ile Ser	
3260		3265		3270	
Gly Asn	Glu His Gly Lys Phe	Ser Ile Asp Ser	Lys	Thr Gly Ala	
3275		3280		3285	
Val Phe	Ile Ile Glu Asn Leu	Asp Tyr Glu Ser	Ser	His Glu Tyr	
3290		3295		3300	
Tyr Leu	Thr Val Glu Ala Thr	Asp Gly Gly Thr	Pro	Ser Leu Ser	
3305		3310		3315	
Asp Val	Ala Thr Val Asn Val	Asn Val Thr Asp	Ile	Asn Asp Asn	
3320		3325		3330	
Thr Pro	Val Phe Ser Gln Asp	Thr Tyr Thr Thr	Val	Ile Ser Glu	
3335		3340		3345	
Asp Ala	Val Leu Glu Gln Ser	Val Ile Thr Val	Met	Ala Asp Asp	
3350		3355		3360	

Ala	Asp	Gly	Pro	Ser	Asn	Ser	His	Ile	His	Tyr	Ser	Ile	Ile	Asp
3365						3370					3375			
Gly	Asn	Gln	Gly	Ser	Ser	Phe	Thr	Ile	Asp	Pro	Val	Arg	Gly	Glu
3380						3385					3390			
Val	Lys	Val	Thr	Lys	Leu	Leu	Asp	Arg	Glu	Thr	Ile	Ser	Gly	Tyr
3395						3400					3405			
Thr	Leu	Thr	Val	Gln	Ala	Ser	Asp	Asn	Gly	Ser	Pro	Pro	Arg	Val
3410						3415					3420			
Asn	Thr	Thr	Thr	Val	Asn	Ile	Asp	Val	Ser	Asp	Val	Asn	Asp	Asn
3425						3430					3435			
Ala	Pro	Val	Phe	Ser	Arg	Gly	Asn	Tyr	Ser	Val	Ile	Ile	Gln	Glu
3440						3445					3450			
Asn	Lys	Pro	Val	Gly	Phe	Ser	Val	Leu	Gln	Leu	Val	Val	Thr	Asp
3455						3460					3465			
Glu	Asp	Ser	Ser	His	Asn	Gly	Pro	Pro	Phe	Phe	Phe	Thr	Ile	Val
3470						3475					3480			
Thr	Gly	Asn	Asp	Glu	Lys	Ala	Phe	Glu	Val	Asn	Pro	Gln	Gly	Val
3485						3490					3495			
Leu	Leu	Thr	Ser	Ser	Ala	Ile	Lys	Arg	Lys	Glu	Lys	Asp	His	Tyr
3500						3505					3510			
Leu	Leu	Gln	Val	Lys	Val	Ala	Asp	Asn	Gly	Lys	Pro	Gln	Leu	Ser
3515						3520					3525			
Ser	Leu	Thr	Tyr	Ile	Asp	Ile	Arg	Val	Ile	Glu	Glu	Ser	Ile	Tyr
3530						3535					3540			
Pro	Pro	Ala	Ile	Leu	Pro	Leu	Glu	Ile	Phe	Ile	Thr	Ser	Ser	Gly
3545						3550					3555			
Glu	Glu	Tyr	Ser	Gly	Gly	Val	Ile	Gly	Lys	Ile	His	Ala	Thr	Asp
3560						3565					3570			
Gln	Asp	Val	Tyr	Asp	Thr	Leu	Thr	Tyr	Ser	Leu	Asp	Pro	Gln	Met
3575						3580					3585			
Asp	Asn	Leu	Phe	Ser	Val	Ser	Ser	Thr	Gly	Gly	Lys	Leu	Ile	Ala

3590		3595		3600
His Lys Lys Leu Asp Ile Gly Gln Tyr Leu Leu Asn Val Ser Val	3605	3610		3615
Thr Asp Gly Lys Phe Thr Thr Val Ala Asp Ile Thr Val His Ile	3620	3625		3630
Arg Gln Val Thr Gln Glu Met Leu Asn His Thr Ile Ala Ile Arg	3635	3640		3645
Phe Ala Asn Leu Thr Pro Glu Glu Phe Val Gly Asp Tyr Trp Arg	3650	3655		3660
Asn Phe Gln Arg Ala Leu Arg Asn Ile Leu Gly Val Arg Arg Asn	3665	3670		3675
Asp Ile Gln Ile Val Ser Leu Gln Ser Ser Glu Pro His Pro His	3680	3685		3690
Leu Asp Val Leu Leu Phe Val Glu Lys Pro Gly Ser Ala Gln Ile	3695	3700		3705
Ser Thr Lys Gln Leu Leu His Lys Ile Asn Ser Ser Val Thr Asp	3710	3715		3720
Ile Glu Glu Ile Ile Gly Val Arg Ile Leu Asn Val Phe Gln Lys	3725	3730		3735
Leu Cys Ala Gly Leu Asp Cys Pro Trp Lys Phe Cys Asp Glu Lys	3740	3745		3750
Val Ser Val Asp Glu Ser Val Met Ser Thr His Ser Thr Ala Arg	3755	3760		3765
Leu Ser Phe Val Thr Pro Arg His His Arg Ala Ala Val Cys Leu	3770	3775		3780
Cys Lys Glu Gly Arg Cys Pro Pro Val His His Gly Cys Glu Asp	3785	3790		3795
Asp Pro Cys Pro Glu Gly Ser Glu Cys Val Ser Asp Pro Trp Glu	3800	3805		3810
Glu Lys His Thr Cys Val Cys Pro Ser Gly Arg Phe Gly Gln Cys	3815	3820		3825

Pro Gly	Ser Ser Ser Met Thr	Leu Thr Gly Asn Ser	Tyr Val Lys
3830		3835	3840
Tyr Arg	Leu Thr Glu Asn Glu	Asn Lys Leu Glu Met	Lys Leu Thr
3845		3850	3855
Met Arg	Leu Arg Thr Tyr Ser	Thr His Ala Val Val	Met Tyr Ala
3860		3865	3870
Arg Gly	Thr Asp Tyr Ser Ile	Leu Glu Ile His His	Gly Arg Leu
3875		3880	3885
Gln Tyr	Lys Phe Asp Cys Gly	Ser Gly Pro Gly Ile	Val Ser Val
3890		3895	3900
Gln Ser	Ile Gln Val Asn Asp	Gly Gln Trp His Ala	Val Ala Leu
3905		3910	3915
Glu Val	Asn Gly Asn Tyr Ala	Arg Leu Val Leu Asp	Gln Val His
3920		3925	3930
Thr Ala	Ser Gly Thr Ala Pro	Gly Thr Leu Lys Thr	Leu Asn Leu
3935		3940	3945
Asp Asn	Tyr Val Phe Phe Gly	Gly His Ile Arg Gln	Gln Gly Thr
3950		3955	3960
Arg His	Gly Arg Ser Pro Gln	Val Gly Asn Gly Phe	Arg Gly Cys
3965		3970	3975
Met Asp	Ser Ile Tyr Leu Asn	Gly Gln Glu Leu Pro	Leu Asn Ser
3980		3985	3990
Lys Pro	Arg Ser Tyr Ala His	Ile Glu Glu Ser Val	Asp Val Ser
3995		4000	4005
Pro Gly	Cys Phe Leu Thr Ala	Thr Glu Asp Cys Ala	Ser Asn Pro
4010		4015	4020
Cys Gln	Asn Gly Gly Val Cys	Asn Pro Ser Pro Ala	Gly Gly Tyr
4025		4030	4035
Tyr Cys	Lys Cys Ser Ala Leu	Tyr Ile Gly Thr His	Cys Glu Ile
4040		4045	4050

Ser	Val	Asn	Pro	Cys	Ser	Ser	Asn	Pro	Cys	Leu	Tyr	Gly	Gly	Thr
4055						4060					4065			
Cys	Val	Val	Asp	Asn	Gly	Gly	Phe	Val	Cys	Gln	Cys	Arg	Gly	Leu
4070						4075					4080			
Tyr	Thr	Gly	Gln	Arg	Cys	Gln	Leu	Ser	Pro	Tyr	Cys	Lys	Asp	Glu
4085						4090					4095			
Pro	Cys	Lys	Asn	Gly	Gly	Thr	Cys	Phe	Asp	Ser	Leu	Asp	Gly	Ala
4100						4105					4110			
Val	Cys	Gln	Cys	Asp	Ser	Gly	Phe	Arg	Gly	Glu	Arg	Cys	Gln	Ser
4115						4120					4125			
Asp	Ile	Asp	Glu	Cys	Ser	Gly	Asn	Pro	Cys	Leu	His	Gly	Ala	Leu
4130						4135					4140			
Cys	Glu	Asn	Thr	His	Gly	Ser	Tyr	His	Cys	Asn	Cys	Ser	His	Glu
4145						4150					4155			
Tyr	Arg	Gly	Arg	His	Cys	Glu	Asp	Ala	Ala	Pro	Asn	Gln	Tyr	Val
4160						4165					4170			
Ser	Thr	Pro	Trp	Asn	Ile	Gly	Leu	Ala	Glu	Gly	Ile	Gly	Ile	Val
4175						4180					4185			
Val	Phe	Val	Ala	Gly	Ile	Phe	Leu	Leu	Val	Val	Val	Phe	Val	Leu
4190						4195					4200			
Cys	Arg	Lys	Met	Ile	Ser	Arg	Lys	Lys	Lys	His	Gln	Ala	Glu	Pro
4205						4210					4215			
Lys	Asp	Lys	His	Leu	Gly	Pro	Ala	Thr	Ala	Phe	Leu	Gln	Arg	Pro
4220						4225					4230			
Tyr	Phe	Asp	Ser	Lys	Leu	Asn	Lys	Asn	Ile	Tyr	Ser	Asp	Ile	Pro
4235						4240					4245			
Pro	Gln	Val	Pro	Val	Arg	Pro	Ile	Ser	Tyr	Thr	Pro	Ser	Ile	Pro
4250						4255					4260			
Ser	Asp	Ser	Arg	Asn	Asn	Leu	Asp	Arg	Asn	Ser	Phe	Glu	Gly	Ser
4265						4270					4275			

Ala	Ile	Pro	Glu	His	Pro	Glu	Phe	Ser	Thr	Phe	Asn	Pro	Glu	Ser
4280						4285					4290			
Val	His	Gly	His	Arg	Lys	Ala	Val	Ala	Val	Cys	Ser	Val	Ala	Pro
4295						4300					4305			
Asn	Leu	Pro	Pro	Pro	Pro	Pro	Ser	Asn	Ser	Pro	Ser	Asp	Ser	Asp
4310						4315					4320			
Ser	Ile	Gln	Lys	Pro	Ser	Trp	Asp	Phe	Asp	Tyr	Asp	Thr	Lys	Val
4325						4330					4335			
Val	Asp	Leu	Asp	Pro	Cys	Leu	Ser	Lys	Lys	Pro	Leu	Glu	Glu	Lys
4340						4345					4350			
Pro	Ser	Gln	Pro	Tyr	Ser	Ala	Arg	Glu	Ser	Leu	Ser	Glu	Val	Gln
4355						4360					4365			
Ser	Leu	Ser	Ser	Phe	Gln	Ser	Glu	Ser	Cys	Asp	Asp	Asn	Gly	Tyr
4370						4375					4380			
His	Trp	Asp	Thr	Ser	Asp	Trp	Met	Pro	Ser	Val	Pro	Leu	Pro	Asp
4385						4390					4395			
Ile	Gln	Glu	Phe	Pro	Asn	Tyr	Glu	Val	Ile	Asp	Glu	Gln	Thr	Pro
4400						4405					4410			
Leu	Tyr	Ser	Ala	Asp	Pro	Asn	Ala	Ile	Asp	Thr	Asp	Tyr	Tyr	Pro
4415						4420					4425			
Gly	Gly	Tyr	Asp	Ile	Glu	Ser	Asp	Phe	Pro	Pro	Pro	Pro	Glu	Asp
4430						4435					4440			
Phe	Pro	Ala	Ala	Asp	Glu	Leu	Pro	Pro	Leu	Pro	Pro	Glu	Phe	Ser
4445						4450					4455			
Asn	Gln	Phe	Glu	Ser	Ile	His	Pro	Pro	Arg	Asp	Met	Pro	Ala	Ala
4460						4465					4470			
Gly	Ser	Leu	Gly	Ser	Ser	Ser	Arg	Asn	Arg	Gln	Arg	Phe	Asn	Leu
4475						4480					4485			
Asn	Gln	Tyr	Leu	Pro	Asn	Phe	Tyr	Pro	Leu	Asp	Met	Ser	Glu	Pro
4490						4495					4500			
Gln	Thr	Lys	Gly	Thr	Gly	Glu	Asn	Ser	Thr	Cys	Arg	Glu	Pro	His



4505		4510		4515
Ala Pro Tyr Pro Pro Gly Tyr Gln Arg His Phe Glu Ala Pro Ala				
4520		4525		4530
Val Glu Ser Met Pro Met Ser Val Tyr Ala Ser Thr Ala Ser Cys				
4535		4540		4545
Ser Asp Val Ser Ala Cys Cys Glu Val Glu Ser Glu Val Met Met				
4550		4555		4560
Ser Asp Tyr Glu Ser Gly Asp Asp Gly His Phe Glu Glu Val Thr				
4565		4570		4575
Ile Pro Pro Leu Asp Ser Gln Gln His Thr Glu Val				
4580		4585		4590
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<212>	PRT			
<213>	Homo Sapiens			
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Met Cys Tyr Gly Lys Cys Ala Arg Cys Ile Gly His Ser Leu Val Gly				
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Leu Ala Leu Leu Cys Ile Ala Ala Asn Ile Leu Leu Tyr Phe Pro Asn				
	20		25	30
Gly Glu Thr Lys Tyr Ala Ser Glu Asn His Leu Ser Arg Phe Val Trp				
	35		40	45
Phe Phe Ser Gly Ile Val Gly Gly Gly Leu Leu Met Leu Leu Pro Ala				
	50		55	60
Phe Val Phe Ile Gly Leu Glu Gln Asp Asp Cys Cys Gly Cys Cys Gly				
65		70	75	80
His Glu Asn Cys Gly Lys Arg Cys Ala Met Leu Ser Ser Val Leu Ala				
	85		90	95
Ala Leu Ile Gly Ile Ala Gly Ser Gly Tyr Cys Val Ile Val Ala Ala				
	100		105	110
Leu Gly Leu Ala Glu Gly Pro Leu Cys Leu Asp Ser Leu Gly Gln Trp				
	115		120	125

Asn Tyr Thr Phe Ala Ser Thr Glu Gly Gln Tyr Leu Leu Asp Thr Ser  
 130 135 140

Thr Trp Ser Glu Cys Thr Glu Pro Lys His Ile Val Glu Trp Asn Val  
 145 150 155 160

Ser Leu Phe Ser Ile Leu Leu Ala Leu Gly Gly Ile Glu Phe Ile Leu  
 165 170 175

Cys Leu Ile Gln Val Ile Asn Gly Val Leu Gly Gly Ile Cys Gly Phe  
 180 185 190

Cys Cys Ser His Gln Gln Gln Tyr Asp Cys  
 195 200

<210> 95  
 <211> 1035  
 <212> PRT  
 <213> Homo Sapiens

<400> 95

Met Ser Thr Glu Asn Val Glu Gly Lys Pro Ser Asn Leu Gly Glu Arg  
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Gly Arg Ala Arg Ser Ser Thr Phe Leu Arg Val Val Gln Pro Met Phe  
 20 25 30

Asn His Ser Ile Phe Thr Ser Ala Val Ser Pro Ala Ala Glu Arg Ile  
 35 40 45

Arg Phe Ile Leu Gly Glu Glu Asp Asp Ser Pro Ala Pro Pro Gln Leu  
 50 55 60

Phe Thr Glu Leu Asp Glu Leu Leu Ala Val Asp Gly Gln Glu Met Glu  
 65 70 75 80

Trp Lys Glu Thr Ala Arg Trp Ile Lys Phe Glu Glu Lys Val Glu Gln  
 85 90 95

Gly Gly Glu Arg Trp Ser Lys Pro His Val Ala Thr Leu Ser Leu His  
 100 105 110

Ser Leu Phe Glu Leu Arg Thr Cys Met Glu Lys Gly Ser Ile Met Leu  
 115 120 125

Asp Arg Glu Ala Ser Ser Leu Pro Gln Leu Val Glu Met Ile Val Asp

130		135		140
His Gln Ile Glu Thr Gly Leu Leu Lys Pro Glu Leu Lys Asp Lys Val				
145		150		155
				160
Thr Tyr Thr Leu Leu Arg Lys His Arg His Gln Thr Lys Lys Ser Asn				
		165		170
				175
Leu Arg Ser Leu Ala Asp Ile Gly Lys Thr Val Ser Ser Ala Ser Arg				
		180		185
				190
Met Phe Thr Asn Pro Asp Asn Gly Ser Pro Ala Met Thr His Arg Asn				
		195		200
				205
Leu Thr Ser Ser Ser Leu Asn Asp Ile Ser Asp Lys Pro Glu Lys Asp				
		210		215
				220
Gln Leu Lys Asn Lys Phe Met Lys Lys Leu Pro Arg Asp Ala Glu Ala				
225		230		235
				240
Ser Asn Val Leu Val Gly Glu Val Asp Phe Leu Asp Thr Pro Phe Ile				
		245		250
				255
Ala Phe Val Arg Leu Gln Gln Ala Val Met Leu Gly Ala Leu Thr Glu				
		260		265
				270
Val Pro Val Pro Thr Arg Phe Leu Phe Ile Leu Leu Gly Pro Lys Gly				
		275		280
				285
Lys Ala Lys Ser Tyr His Glu Ile Gly Arg Ala Ile Ala Thr Leu Met				
		290		295
				300
Ser Asp Glu Val Phe His Asp Ile Ala Tyr Lys Ala Lys Asp Arg His				
305		310		315
				320
Asp Leu Ile Ala Gly Ile Asp Glu Phe Leu Asp Glu Val Ile Val Leu				
		325		330
				335
Pro Pro Gly Glu Trp Asp Pro Ala Ile Arg Ile Glu Pro Pro Lys Ser				
		340		345
				350
Leu Pro Ser Ser Asp Lys Arg Lys Asn Met Tyr Ser Gly Gly Glu Asn				
		355		360
				365
Val Gln Met Asn Gly Asp Thr Pro His Asp Gly Gly His Gly Gly Gly				
		370		375
				380

Gly His Gly Asp Cys Glu Glu Leu Gln Arg Thr Gly Arg Phe Cys Gly  
 385 390 395 400

Gly Leu Ile Lys Asp Ile Lys Arg Lys Ala Pro Phe Phe Ala Ser Asp  
 405 410 415

Phe Tyr Asp Ala Leu Asn Ile Gln Ala Leu Ser Ala Ile Leu Phe Ile  
 420 425 430

Tyr Leu Ala Thr Val Thr Asn Ala Ile Thr Phe Gly Gly Leu Leu Gly  
 435 440 445

Asp Ala Thr Asp Asn Met Gln Gly Val Leu Glu Ser Phe Leu Gly Thr  
 450 455 460

Ala Val Ser Gly Ala Ile Phe Cys Leu Phe Ala Gly Gln Pro Leu Thr  
 465 470 475 480

Ile Leu Ser Ser Thr Gly Pro Val Leu Val Phe Glu Arg Leu Leu Phe  
 485 490 495

Asn Phe Ser Lys Asp Asn Asn Phe Asp Tyr Leu Glu Phe Arg Leu Trp  
 500 505 510

Ile Gly Leu Trp Ser Ala Phe Leu Cys Leu Ile Leu Val Ala Thr Asp  
 515 520 525

Ala Ser Phe Leu Val Gln Tyr Phe Thr Arg Phe Thr Glu Glu Gly Phe  
 530 535 540

Ser Ser Leu Ile Ser Phe Ile Phe Ile Tyr Asp Ala Phe Lys Lys Met  
 545 550 555 560

Ile Lys Leu Ala Asp Tyr Tyr Pro Ile Asn Ser Asn Phe Lys Val Gly  
 565 570 575

Tyr Asn Thr Leu Phe Ser Cys Thr Cys Val Pro Pro Asp Pro Ala Asn  
 580 585 590

Ile Ser Ile Ser Asn Asp Thr Thr Leu Ala Pro Glu Tyr Leu Pro Thr  
 595 600 605

Met Ser Ser Thr Asp Met Tyr His Asn Thr Thr Phe Asp Trp Ala Phe  
 610 615 620

Leu Ser Lys Lys Glu Cys Ser Lys Tyr Gly Gly Asn Leu Val Gly Asn  
 625 630 635 640

Asn Cys Asn Phe Val Pro Asp Ile Thr Leu Met Ser Phe Ile Leu Phe  
 645 650 655

Leu Gly Thr Tyr Thr Ser Ser Met Ala Leu Lys Lys Phe Lys Thr Ser  
 660 665 670

Pro Tyr Phe Pro Thr Thr Ala Arg Lys Leu Ile Ser Asp Phe Ala Ile  
 675 680 685

Ile Leu Ser Ile Leu Ile Phe Cys Val Ile Asp Ala Leu Val Gly Val  
 690 695 700

Asp Thr Pro Lys Leu Ile Val Pro Ser Glu Phe Lys Pro Thr Ser Pro  
 705 710 715 720

Asn Arg Gly Trp Phe Val Pro Pro Phe Gly Glu Asn Pro Trp Trp Val  
 725 730 735

Cys Leu Ala Ala Ala Ile Pro Ala Leu Leu Val Thr Ile Leu Ile Phe  
 740 745 750

Met Asp Gln Gln Ile Thr Ala Val Ile Val Asn Arg Lys Glu His Lys  
 755 760 765

Leu Lys Lys Gly Ala Gly Tyr His Leu Asp Leu Phe Trp Val Ala Ile  
 770 775 780

Leu Met Val Ile Cys Ser Leu Met Ala Leu Pro Trp Tyr Val Ala Ala  
 785 790 795 800

Thr Val Ile Ser Ile Ala His Ile Asp Ser Leu Lys Met Glu Thr Glu  
 805 810 815

Thr Ser Ala Pro Gly Glu Gln Pro Lys Phe Leu Gly Val Arg Glu Gln  
 820 825 830

Arg Val Thr Gly Thr Leu Val Phe Ile Leu Thr Gly Leu Ser Val Phe  
 835 840 845

Met Ala Pro Ile Leu Lys Phe Ile Pro Met Pro Val Leu Tyr Gly Val  
 850 855 860

Phe Leu Tyr Met Gly Val Ala Ser Leu Asn Gly Val Gln Phe Met Asp  
 865 870 875 880

Arg Leu Lys Leu Leu Leu Met Pro Leu Lys His Gln Pro Asp Phe Ile  
 885 890 895

Tyr Leu Arg His Val Pro Leu Arg Arg Val His Leu Phe Thr Phe Leu  
 900 905 910

Gln Val Leu Cys Leu Ala Leu Leu Trp Ile Leu Lys Ser Thr Val Ala  
 915 920 925

Ala Ile Ile Phe Pro Val Met Ile Leu Ala Leu Val Ala Val Arg Lys  
 930 935 940

Gly Met Asp Tyr Leu Phe Ser Gln His Asp Leu Ser Phe Leu Asp Asp  
 945 950 955 960

Val Ile Pro Glu Lys Asp Lys Lys Lys Lys Glu Asp Glu Lys Lys Lys  
 965 970 975

Lys Lys Lys Lys Gly Ser Leu Asp Ser Asp Asn Asp Asp Ser Asp Cys  
 980 985 990

Pro Tyr Ser Glu Lys Val Pro Ser Ile Lys Ile Pro Met Asp Ile Met  
 995 1000 1005

Glu Gln Gln Pro Phe Leu Ser Asp Ser Lys Pro Ser Asp Arg Glu  
 1010 1015 1020

Arg Ser Pro Thr Phe Leu Glu Arg His Thr Ser Cys  
 1025 1030 1035

<210> 96  
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 <212> PRT  
 <213> Homo Sapiens

<400> 96

Met Ser Thr Pro Gly Val Asn Ser Ser Ala Ser Leu Ser Pro Asp Arg  
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Leu Asn Ser Pro Val Thr Ile Pro Ala Val Met Phe Ile Phe Gly Val  
 20 25 30

Val Gly Asn Leu Val Ala Ile Val Val Leu Cys Lys Ser Arg Lys Glu  
 35 40 45

Gln Lys Glu Thr Thr Phe Tyr Thr Leu Val Cys Gly Leu Ala Val Thr  
 50 55 60

Asp Leu Leu Gly Thr Leu Leu Val Ser Pro Val Thr Ile Ala Thr Tyr  
 65 70 75 80

Met Lys Gly Gln Trp Pro Gly Gly Gln Pro Leu Cys Glu Tyr Ser Thr  
 85 90 95

Phe Ile Leu Leu Phe Phe Ser Leu Ser Gly Leu Ser Ile Ile Cys Ala  
 100 105 110

Met Ser Val Glu Arg Tyr Leu Ala Ile Asn His Ala Tyr Phe Tyr Ser  
 115 120 125

His Tyr Val Asp Lys Arg Leu Ala Gly Leu Thr Leu Phe Ala Val Tyr  
 130 135 140

Ala Ser Asn Val Leu Phe Cys Ala Leu Pro Asn Met Gly Leu Gly Ser  
 145 150 155 160

Ser Arg Leu Gln Tyr Pro Asp Thr Trp Cys Phe Ile Asp Trp Thr Thr  
 165 170 175

Asn Val Thr Ala His Ala Ala Tyr Ser Tyr Met Tyr Ala Gly Phe Ser  
 180 185 190

Ser Phe Leu Ile Leu Ala Thr Val Leu Cys Asn Val Leu Val Cys Gly  
 195 200 205

Ala Leu Leu Arg Met His Arg Gln Phe Met Arg Arg Thr Ser Leu Gly  
 210 215 220

Thr Glu Gln His His Ala Ala Ala Ala Ala Ser Val Ala Ser Arg Gly  
 225 230 235 240

His Pro Ala Ala Ser Pro Ala Leu Pro Arg Leu Ser Asp Phe Arg Arg  
 245 250 255

Arg Arg Ser Phe Arg Arg Ile Ala Gly Ala Glu Ile Gln Met Val Ile  
 260 265 270

Leu Leu Ile Ala Thr Ser Leu Val Val Leu Ile Cys Ser Ile Pro Leu  
 275 280 285

Val Val Arg Val Phe Val Asn Gln Leu Tyr Gln Pro Ser Leu Glu Arg  
 290 295 300

Glu Val Ser Lys Asn Pro Asp Leu Gln Ala Ile Arg Ile Ala Ser Val  
 305 310 315 320

Asn Pro Ile Leu Asp Pro Trp Ile Tyr Ile Leu Leu Arg Lys Thr Val  
 325 330 335

Leu Ser Lys Ala Ile Glu Lys Ile Lys Cys Leu Phe Cys Arg Ile Gly  
 340 345 350

Gly Ser Arg Arg Glu Arg Ser Gly Gln His Cys Ser Asp Ser Gln Arg  
 355 360 365

Thr Ser Ser Ala Met Ser Gly His Ser Arg Ser Phe Ile Ser Arg Glu  
 370 375 380

Leu Lys Glu Ile Ser Ser Thr Ser Gln Thr Leu Leu Pro Asp Leu Ser  
 385 390 395 400

Leu Pro Asp Leu Ser Glu Asn Gly Leu Gly Gly Arg Asn Leu Leu Pro  
 405 410 415

Gly Val Pro Gly Met Gly Leu Ala Gln Glu Asp Thr Thr Ser Leu Arg  
 420 425 430

Thr Leu Arg Ile Ser Glu Thr Ser Asp Ser Ser Gln Gly Gln Asp Ser  
 435 440 445

Glu Ser Val Leu Leu Val Asp Glu Ala Gly Gly Ser Gly Arg Ala Gly  
 450 455 460

Pro Ala Pro Lys Gly Ser Ser Leu Gln Val Thr Phe Pro Ser Glu Thr  
 465 470 475 480

<210> 97  
 <211> 335  
 <212> PRT  
 <213> Homo Sapiens

<400> 97

Met Gly His Pro Pro Leu Leu Pro Leu Leu Leu Leu His Thr Cys  
 1 5 10 15

Val Pro Ala Ser Trp Gly Leu Arg Cys Met Gln Cys Lys Thr Asn Gly



20	25	30
Asp Cys Arg Val Glu Glu Cys Ala Leu Gly Gln Asp Leu Cys Arg Thr		
35	40	45
Thr Ile Val Arg Leu Trp Glu Glu Gly Glu Glu Leu Glu Leu Val Glu		
50	55	60
Lys Ser Cys Thr His Ser Glu Lys Thr Asn Arg Thr Leu Ser Tyr Arg		
65	70	75
Thr Gly Leu Lys Ile Thr Ser Leu Thr Glu Val Val Cys Gly Leu Asp		
85	90	95
Leu Cys Asn Gln Gly Asn Ser Gly Arg Ala Val Thr Tyr Ser Arg Ser		
100	105	110
Arg Tyr Leu Glu Cys Ile Ser Cys Gly Ser Ser Asp Met Ser Cys Glu		
115	120	125
Arg Gly Arg His Gln Ser Leu Gln Cys Arg Ser Pro Glu Glu Gln Cys		
130	135	140
Leu Asp Val Val Thr His Trp Ile Gln Glu Gly Glu Glu Gly Arg Pro		
145	150	155
Lys Asp Asp Arg His Leu Arg Gly Cys Gly Tyr Leu Pro Gly Cys Pro		
165	170	175
Gly Ser Asn Gly Phe His Asn Asn Asp Thr Phe His Phe Leu Lys Cys		
180	185	190
Cys Asn Thr Thr Lys Cys Asn Glu Gly Pro Ile Leu Glu Leu Glu Asn		
195	200	205
Leu Pro Gln Asn Gly Arg Gln Cys Tyr Ser Cys Lys Gly Asn Ser Thr		
210	215	220
His Gly Cys Ser Ser Glu Glu Thr Phe Leu Ile Asp Cys Arg Gly Pro		
225	230	235
Met Asn Gln Cys Leu Val Ala Thr Gly Thr His Glu Pro Lys Asn Gln		
245	250	255
Ser Tyr Met Val Arg Gly Cys Ala Thr Ala Ser Met Cys Gln His Ala		
260	265	270

His Leu Gly Asp Ala Phe Ser Met Asn His Ile Asp Val Ser Cys Cys  
 275 280 285

Thr Lys Ser Gly Cys Asn His Pro Asp Leu Asp Val Gln Tyr Arg Ser  
 290 295 300

Gly Ala Ala Pro Gln Pro Gly Pro Ala His Leu Ser Leu Thr Ile Thr  
 305 310 315 320

Leu Leu Met Thr Ala Arg Leu Trp Gly Gly Thr Leu Leu Trp Thr  
 325 330 335

<210> 98  
 <211> 512  
 <212> PRT  
 <213> Homo Sapiens

<400> 98

Met Asp Phe Glu Ser Gly Gln Val Asp Pro Leu Ala Ser Val Ile Leu  
 1 5 10 15

Pro Pro Asn Leu Leu Glu Asn Leu Ser Pro Glu Asp Ser Val Leu Val  
 20 25 30

Arg Arg Ala Gln Phe Thr Phe Phe Asn Lys Thr Gly Leu Phe Gln Asp  
 35 40 45

Val Gly Pro Gln Arg Lys Thr Leu Val Ser Tyr Val Met Ala Cys Ser  
 50 55 60

Ile Gly Asn Ile Thr Ile Gln Asn Leu Lys Asp Pro Val Gln Ile Lys  
 65 70 75 80

Ile Lys His Thr Arg Thr Gln Glu Val His His Pro Ile Cys Ala Phe  
 85 90 95

Trp Asp Leu Asn Lys Asn Lys Ser Phe Gly Gly Trp Asn Thr Ser Gly  
 100 105 110

Cys Val Ala His Arg Asp Ser Asp Ala Ser Glu Thr Val Cys Leu Cys  
 115 120 125

Asn His Phe Thr His Phe Gly Val Leu Met Asp Leu Pro Arg Ser Ala  
 130 135 140

Ser Gln Leu Asp Ala Arg Asn Thr Lys Val Leu Thr Phe Ile Ser Tyr  
 145 150 155 160  
 Ile Gly Cys Gly Ile Ser Ala Ile Phe Ser Ala Ala Thr Leu Leu Thr  
 165 170 175  
 Tyr Val Ala Phe Glu Lys Leu Arg Arg Asp Tyr Pro Ser Lys Ile Leu  
 180 185 190  
 Met Asn Leu Ser Thr Ala Leu Leu Phe Leu Asn Leu Leu Phe Leu Leu  
 195 200 205  
 Asp Gly Trp Ile Thr Ser Phe Asn Val Asp Gly Leu Cys Ile Ala Val  
 210 215 220  
 Ala Val Leu Leu His Phe Phe Leu Leu Ala Thr Phe Thr Trp Met Gly  
 225 230 235 240  
 Leu Glu Ala Ile His Met Tyr Ile Ala Leu Val Lys Val Phe Asn Thr  
 245 250 255  
 Tyr Ile Arg Arg Tyr Ile Leu Lys Phe Cys Ile Ile Gly Trp Gly Leu  
 260 265 270  
 Pro Ala Leu Val Val Ser Val Val Leu Ala Ser Arg Asn Asn Asn Glu  
 275 280 285  
 Val Tyr Gly Lys Glu Ser Tyr Gly Lys Glu Lys Gly Asp Glu Phe Cys  
 290 295 300  
 Trp Ile Gln Asp Pro Val Ile Phe Tyr Val Thr Cys Ala Gly Tyr Phe  
 305 310 315 320  
 Gly Val Met Phe Phe Leu Asn Ile Ala Met Phe Ile Val Val Met Val  
 325 330 335  
 Gln Ile Cys Gly Arg Asn Gly Lys Arg Ser Asn Arg Thr Leu Arg Glu  
 340 345 350  
 Glu Val Leu Arg Asn Leu Arg Ser Val Val Ser Leu Thr Phe Leu Leu  
 355 360 365  
 Gly Met Thr Trp Gly Phe Ala Phe Phe Ala Trp Gly Pro Leu Asn Ile  
 370 375 380  
 Pro Phe Met Tyr Leu Phe Ser Ile Phe Asn Ser Leu Gln Gly Leu Phe

385                      390                      395                      400  
 Ile Phe Ile Phe His Cys Ala Met Lys Glu Asn Val Gln Lys Gln Trp  
                                  405                      410                      415  
 Arg Arg His Leu Cys Cys Gly Arg Phe Arg Leu Ala Asp Asn Ser Asp  
                                  420                      425                      430  
 Trp Ser Lys Thr Ala Thr Asn Ile Ile Lys Lys Ser Ser Asp Asn Leu  
                                  435                      440                      445  
 Gly Lys Ser Leu Ser Ser Ser Ser Ile Gly Ser Asn Ser Thr Tyr Leu  
                                  450                      455                      460  
 Thr Ser Lys Ser Lys Ser Ser Ser Thr Thr Tyr Phe Lys Arg Asn Ser  
 465                                   470                      475                      480  
 His Thr Asp Asn Val Ser Tyr Glu His Ser Phe Asn Lys Ser Gly Ser  
                                  485                      490                      495  
 Leu Arg Gln Cys Phe His Gly Gln Val Leu Val Lys Thr Gly Pro Cys  
                                  500                      505                      510  
  
 <210> 99  
 <211> 202  
 <212> PRT  
 <213> Homo Sapiens  
  
 <400> 99  
 Met Lys Val Leu Ala Ala Gly Val Val Pro Leu Leu Leu Val Leu His  
 1                                   5                      10                      15  
  
 Trp Lys His Gly Ala Gly Ser Pro Leu Pro Ile Thr Pro Val Asn Ala  
                                  20                      25                      30  
  
 Thr Cys Ala Ile Arg His Pro Cys His Asn Asn Leu Met Asn Gln Ile  
                                  35                      40                      45  
  
 Arg Ser Gln Leu Ala Gln Leu Asn Gly Ser Ala Asn Ala Leu Phe Ile  
                                  50                      55                      60  
  
 Leu Tyr Tyr Thr Ala Gln Gly Glu Pro Phe Pro Asn Asn Leu Asp Lys  
 65                                   70                      75                      80  
  
 Leu Cys Gly Pro Asn Val Thr Asp Phe Pro Pro Phe His Ala Asn Gly  
                                  85                      90                      95

Thr Glu Lys Ala Lys Leu Val Glu Leu Tyr Arg Ile Val Val Tyr Leu  
100 105 110

Gly Thr Ser Leu Gly Asn Ile Thr Arg Asp Gln Lys Ile Leu Asn Pro  
115 120 125

Ser Ala Leu Ser Leu His Ser Lys Leu Asn Ala Thr Ala Asp Ile Leu  
130 135 140

Arg Gly Leu Leu Ser Asn Val Leu Cys Arg Leu Cys Ser Lys Tyr His  
145 150 155 160

Val Gly His Val Asp Val Thr Tyr Gly Pro Asp Thr Ser Gly Lys Asp  
165 170 175

Val Phe Gln Lys Lys Lys Leu Gly Cys Gln Leu Leu Gly Lys Tyr Lys  
180 185 190

Gln Ile Ile Ala Val Leu Ala Gln Ala Phe  
195 200

<210> 100  
<211> 504  
<212> PRT  
<213> Homo Sapiens  
<400> 100

Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu Leu  
1 5 10 15

Gly Ala Phe Pro Pro Ala Ala Ala Ala Arg Gly Pro Pro Lys Met Ala  
20 25 30

Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg Thr Val Arg  
35 40 45

Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu Thr Met Trp Thr  
50 55 60

Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser Arg Phe Arg Val Leu  
65 70 75 80

Pro Gln Gly Leu Lys Val Lys Gln Val Glu Arg Glu Asp Ala Gly Val  
85 90 95

Tyr Val Cys Lys Ala Thr Asn Gly Phe Gly Ser Leu Ser Val Asn Tyr

100					105					110					
Thr	Leu	Val	Val	Leu	Asp	Asp	Ile	Ser	Pro	Gly	Lys	Glu	Ser	Leu	Gly
		115					120					125			
Pro	Asp	Ser	Ser	Ser	Gly	Gly	Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp
	130					135					140				
Ala	Arg	Pro	Arg	Phe	Thr	Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile
145					150					155					160
Ala	Arg	Pro	Val	Gly	Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly
				165					170					175	
His	Pro	Arg	Pro	Asp	Ile	Thr	Trp	Met	Lys	Asp	Asp	Gln	Ala	Leu	Thr
			180					185					190		
Arg	Pro	Glu	Ala	Ala	Glu	Pro	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu
		195					200					205			
Lys	Asn	Leu	Arg	Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser
	210					215					220				
Asn	Arg	Ala	Gly	Ala	Ile	Asn	Ala	Thr	Tyr	Lys	Val	Asp	Val	Ile	Gln
225					230					235					240
Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	Thr
				245					250					255	
Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	Arg	Ser
			260					265					270		
Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	Tyr	Gly	Ala
		275					280					285			
Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	Gln	Lys	Phe	Val
	290					295					300				
Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	Asp	Gly	Ser	Tyr	Leu
305					310					315					320
Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln	Asp	Asp	Ala	Gly	Met	Tyr
				325					330					335	
Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	Tyr	Ser	Phe	Arg	Ser	Ala	Phe
			340					345					350		

Leu Thr Val Leu Pro Asp Pro Lys Pro Gln Gly Pro Pro Val Ala Ser  
 355 360 365

Ser Ser Ser Ala Thr Ser Leu Pro Trp Pro Val Val Ile Gly Ile Pro  
 370 375 380

Ala Gly Ala Val Phe Ile Leu Gly Thr Leu Leu Leu Trp Leu Cys Gln  
 385 390 395 400

Ala Gln Lys Lys Pro Cys Thr Pro Ala Pro Ala Pro Pro Leu Pro Gly  
 405 410 415

His Arg Pro Pro Gly Thr Ala Arg Asp Arg Ser Gly Asp Lys Asp Leu  
 420 425 430

Pro Ser Leu Ala Ala Leu Ser Ala Gly Pro Gly Val Gly Leu Cys Glu  
 435 440 445

Glu His Gly Ser Pro Ala Ala Pro Gln His Leu Leu Gly Pro Gly Pro  
 450 455 460

Val Ala Gly Pro Lys Leu Tyr Pro Lys Leu Tyr Thr Asp Ile His Thr  
 465 470 475 480

His Thr His Thr His Ser His Thr His Ser His Val Glu Gly Lys Val  
 485 490 495

His Gln His Ile His Tyr Gln Cys  
 500

<210> 101  
 <211> 915  
 <212> PRT  
 <213> Homo Sapiens

<400> 101

Met Gly Arg Pro Arg Leu Thr Leu Val Cys His Val Ser Ile Ile Ile  
 1 5 10 15

Ser Ala Arg Asp Leu Ser Met Asn Asn Leu Thr Glu Leu Gln Pro Gly  
 20 25 30

Leu Phe His His Leu Arg Phe Leu Glu Glu Leu Arg Leu Ser Gly Asn  
 35 40 45

His Leu Ser His Ile Pro Gly Gln Ala Phe Ser Gly Leu Tyr Ser Leu  
 50 55 60

Lys Ile Leu Met Leu Gln Asn Asn Gln Leu Gly Gly Ile Pro Ala Glu  
 65 70 75 80

Ala Leu Trp Glu Leu Pro Ser Leu Gln Ser Leu Arg Leu Asp Ala Asn  
 85 90 95

Leu Ile Ser Leu Val Pro Glu Arg Ser Phe Glu Gly Leu Ser Ser Leu  
 100 105 110

Arg His Leu Trp Leu Asp Asp Asn Ala Leu Thr Glu Ile Pro Val Arg  
 115 120 125

Ala Leu Asn Asn Leu Pro Ala Leu Gln Ala Met Thr Leu Ala Leu Asn  
 130 135 140

Arg Ile Ser His Ile Pro Asp Tyr Ala Phe Gln Asn Leu Thr Ser Leu  
 145 150 155 160

Val Val Leu His Leu His Asn Asn Arg Ile Gln His Leu Gly Thr His  
 165 170 175

Ser Phe Glu Gly Leu His Asn Leu Glu Thr Leu Asp Leu Asn Tyr Asn  
 180 185 190

Lys Leu Gln Glu Phe Pro Val Ala Ile Arg Thr Leu Gly Arg Leu Gln  
 195 200 205

Glu Leu Gly Phe His Asn Asn Asn Ile Lys Ala Ile Pro Glu Lys Ala  
 210 215 220

Phe Met Gly Asn Pro Leu Leu Gln Thr Ile His Phe Tyr Asp Asn Pro  
 225 230 235 240

Ile Gln Phe Val Gly Arg Ser Ala Phe Gln Tyr Leu Pro Lys Leu His  
 245 250 255

Thr Leu Ser Leu Asn Gly Ala Met Asp Ile Gln Glu Phe Pro Asp Leu  
 260 265 270

Lys Gly Thr Thr Ser Leu Glu Ile Leu Thr Leu Thr Arg Ala Gly Ile  
 275 280 285

Arg Leu Leu Pro Ser Gly Met Cys Gln Gln Leu Pro Arg Leu Arg Val



290		295		300
Leu Glu Leu Ser His Asn Gln Ile Glu Glu Leu Pro Ser Leu His Arg				
305		310		315 320
Cys Gln Lys Leu Glu Glu Ile Gly Leu Gln His Asn Arg Ile Trp Glu				
	325		330	335
Ile Gly Ala Asp Thr Phe Ser Gln Leu Ser Ser Leu Gln Ala Leu Asp				
	340		345	350
Leu Ser Trp Asn Ala Ile Arg Ser Ile His Pro Glu Ala Phe Ser Thr				
	355		360	365
Leu His Ser Leu Val Lys Leu Asp Leu Thr Asp Asn Gln Leu Thr Thr				
	370		375	380
Leu Pro Leu Ala Gly Leu Gly Gly Leu Met His Leu Lys Leu Lys Gly				
385		390		395 400
Asn Leu Ala Leu Ser Gln Ala Phe Ser Lys Asp Ser Phe Pro Lys Leu				
	405		410	415
Arg Ile Leu Glu Val Pro Tyr Ala Tyr Gln Cys Cys Pro Tyr Gly Met				
	420		425	430
Cys Ala Ser Phe Phe Lys Ala Ser Gly Gln Trp Glu Ala Glu Asp Leu				
	435		440	445
His Leu Asp Asp Glu Glu Ser Ser Lys Arg Pro Leu Gly Leu Leu Ala				
450		455		460
Arg Gln Ala Glu Asn His Tyr Asp Gln Asp Leu Asp Glu Leu Gln Leu				
465		470		475 480
Glu Met Glu Asp Ser Lys Pro His Pro Ser Val Gln Cys Ser Pro Thr				
	485		490	495
Pro Gly Pro Phe Lys Pro Cys Glu Tyr Leu Phe Glu Ser Trp Gly Ile				
	500		505	510
Arg Leu Ala Val Trp Ala Ile Val Leu Leu Ser Val Leu Cys Asn Gly				
	515		520	525
Leu Val Leu Leu Thr Val Phe Ala Gly Gly Pro Val Pro Leu Pro Pro				
530		535		540

Val Lys Phe Val Val Gly Ala Ile Ala Gly Ala Asn Thr Leu Thr Gly  
545 550 555 560

Ile Ser Cys Gly Leu Leu Ala Ser Val Asp Ala Leu Thr Phe Gly Gln  
565 570 575

Phe Ser Glu Tyr Gly Ala Arg Trp Glu Thr Gly Leu Gly Cys Arg Ala  
580 585 590

Thr Gly Phe Leu Ala Val Leu Gly Ser Glu Ala Ser Val Leu Leu Leu  
595 600 605

Thr Leu Ala Ala Val Gln Cys Ser Val Ser Val Ser Cys Val Arg Ala  
610 615 620

Tyr Gly Lys Ser Pro Ser Leu Gly Ser Val Arg Ala Gly Val Leu Gly  
625 630 635 640

Cys Leu Ala Leu Ala Gly Leu Ala Ala Ala Leu Pro Leu Ala Ser Val  
645 650 655

Gly Glu Tyr Gly Ala Ser Pro Leu Cys Leu Pro Tyr Ala Pro Pro Glu  
660 665 670

Gly Gln Pro Ala Ala Leu Gly Phe Thr Val Ala Leu Val Met Met Asn  
675 680 685

Ser Phe Cys Phe Leu Val Val Ala Gly Ala Tyr Ile Lys Leu Tyr Cys  
690 695 700

Asp Leu Pro Arg Gly Asp Phe Glu Ala Val Trp Asp Cys Ala Met Val  
705 710 715 720

Arg His Val Ala Trp Leu Ile Phe Ala Asp Gly Leu Leu Tyr Cys Pro  
725 730 735

Val Ala Phe Leu Ser Phe Ala Ser Met Leu Gly Leu Phe Pro Val Thr  
740 745 750

Pro Glu Ala Val Lys Ser Val Leu Leu Val Val Leu Pro Leu Pro Ala  
755 760 765

Cys Leu Asn Pro Leu Leu Tyr Leu Leu Phe Asn Pro His Phe Arg Asp  
770 775 780

Asp Leu Arg Arg Leu Arg Pro Arg Ala Gly Asp Ser Gly Pro Leu Ala  
 785 790 795 800

Tyr Ala Ala Ala Gly Glu Leu Glu Lys Ser Ser Cys Asp Ser Thr Gln  
 805 810 815

Ala Leu Val Ala Phe Ser Asp Val Asp Leu Ile Leu Glu Ala Ser Glu  
 820 825 830

Ala Gly Arg Pro Pro Gly Leu Glu Thr Tyr Gly Phe Pro Ser Val Thr  
 835 840 845

Leu Ile Ser Cys Gln Gln Pro Gly Ala Pro Arg Leu Glu Gly Ser His  
 850 855 860

Cys Val Glu Pro Glu Gly Asn His Phe Gly Asn Pro Gln Pro Ser Met  
 865 870 875 880

Asp Gly Glu Leu Leu Leu Arg Ala Glu Gly Ser Thr Pro Ala Gly Gly  
 885 890 895

Gly Leu Ser Gly Gly Gly Gly Phe Gln Pro Ser Gly Leu Ala Phe Ala  
 900 905 910

Ser His Val  
 915

<210> 102  
 <211> 647  
 <212> PRT  
 <213> Homo Sapiens

<400> 102

Met Ala Ser Leu Val Ser Leu Glu Leu Gly Leu Leu Leu Ala Val Leu  
 1 5 10 15

Val Val Thr Ala Thr Ala Ser Pro Pro Ala Gly Leu Leu Ser Leu Leu  
 20 25 30

Thr Ser Gly Gln Gly Ala Leu Asp Gln Glu Ala Leu Gly Gly Leu Leu  
 35 40 45

Asn Thr Leu Ala Asp Arg Val His Cys Thr Asn Gly Pro Cys Gly Lys  
 50 55 60

Cys Leu Ser Val Glu Asp Ala Leu Gly Leu Gly Glu Pro Glu Gly Ser

65		70		75		80									
Gly	Leu	Pro	Pro	Gly	Pro	Val	Leu	Glu	Ala	Arg	Tyr	Val	Ala	Arg	Leu
				85					90					95	
Ser	Ala	Ala	Ala	Val	Leu	Tyr	Leu	Ser	Asn	Pro	Glu	Gly	Thr	Cys	Glu
			100					105					110		
Asp	Thr	Arg	Ala	Gly	Leu	Trp	Ala	Ser	His	Ala	Asp	His	Leu	Leu	Ala
		115					120					125			
Leu	Leu	Glu	Ser	Pro	Lys	Ala	Leu	Thr	Pro	Gly	Leu	Ser	Trp	Leu	Leu
	130					135					140				
Gln	Arg	Met	Gln	Ala	Arg	Ala	Ala	Gly	Gln	Thr	Pro	Lys	Thr	Ala	Cys
145					150					155					160
Val	Asp	Ile	Pro	Gln	Leu	Leu	Glu	Glu	Ala	Val	Gly	Ala	Gly	Ala	Pro
				165					170					175	
Gly	Ser	Ala	Gly	Gly	Val	Leu	Ala	Ala	Leu	Leu	Asp	His	Val	Arg	Ser
			180					185					190		
Gly	Ser	Cys	Phe	His	Ala	Leu	Pro	Ser	Pro	Gln	Tyr	Phe	Val	Asp	Phe
		195					200					205			
Val	Phe	Gln	Gln	His	Ser	Ser	Glu	Val	Pro	Met	Thr	Leu	Ala	Glu	Leu
	210					215					220				
Ser	Ala	Leu	Met	Gln	Arg	Leu	Gly	Val	Gly	Arg	Glu	Ala	His	Ser	Asp
225					230					235					240
His	Ser	His	Arg	His	Arg	Gly	Ala	Ser	Ser	Arg	Asp	Pro	Val	Pro	Leu
				245					250					255	
Ile	Ser	Ser	Ser	Asn	Ser	Ser	Ser	Val	Trp	Asp	Thr	Val	Cys	Leu	Ser
			260					265					270		
Ala	Arg	Asp	Val	Met	Ala	Ala	Tyr	Gly	Leu	Ser	Glu	Gln	Ala	Gly	Val
		275					280					285			
Thr	Pro	Glu	Ala	Trp	Ala	Gln	Leu	Ser	Pro	Ala	Leu	Leu	Gln	Gln	Gln
	290					295					300				
Leu	Ser	Gly	Ala	Cys	Thr	Ser	Gln	Ser	Arg	Pro	Pro	Val	Gln	Asp	Gln
305					310				315					320	

Leu Ser Gln Ser Glu Arg Tyr Leu Tyr Gly Ser Leu Ala Thr Leu Leu  
325 330 335

Ile Cys Leu Cys Ala Val Phe Gly Leu Leu Leu Leu Thr Cys Thr Gly  
340 345 350

Cys Arg Gly Val Ala His Tyr Ile Leu Gln Thr Phe Leu Ser Leu Ala  
355 360 365

Val Gly Ala Leu Thr Gly Asp Ala Val Leu His Leu Thr Pro Lys Val  
370 375 380

Leu Gly Leu His Thr His Ser Glu Glu Gly Leu Ser Pro Gln Pro Thr  
385 390 395 400

Trp Arg Leu Leu Ala Met Leu Ala Gly Leu Tyr Ala Phe Phe Leu Phe  
405 410 415

Glu Asn Leu Phe Asn Leu Leu Leu Pro Arg Asp Pro Glu Asp Leu Glu  
420 425 430

Asp Gly Pro Cys Gly His Ser Ser His Ser His Gly Gly His Ser His  
435 440 445

Gly Val Ser Leu Gln Leu Ala Pro Ser Glu Leu Arg Gln Pro Lys Pro  
450 455 460

Pro His Glu Gly Ser Arg Ala Asp Leu Val Ala Glu Glu Ser Pro Glu  
465 470 475 480

Leu Leu Asn Pro Glu Pro Arg Arg Leu Ser Pro Glu Leu Arg Leu Leu  
485 490 495

Pro Tyr Met Ile Thr Leu Gly Asp Ala Val His Asn Phe Ala Asp Gly  
500 505 510

Leu Ala Val Gly Ala Ala Phe Ala Ser Ser Trp Lys Thr Gly Leu Ala  
515 520 525

Thr Ser Leu Ala Val Phe Cys His Glu Leu Pro His Glu Leu Gly Asp  
530 535 540

Phe Ala Ala Leu Leu His Ala Gly Leu Ser Val Arg Gln Ala Leu Leu  
545 550 555 560

Leu Asn Leu Ala Ser Ala Leu Thr Ala Phe Ala Gly Leu Tyr Val Ala  
565 570 575

Leu Ala Val Gly Val Ser Glu Glu Ser Glu Ala Trp Ile Leu Ala Val  
580 585 590

Ala Thr Gly Leu Phe Leu Tyr Val Ala Leu Cys Asp Met Leu Pro Ala  
595 600 605

Met Leu Lys Val Arg Asp Pro Arg Pro Trp Leu Leu Phe Leu Leu His  
610 615 620

Asn Val Gly Leu Leu Gly Gly Trp Thr Val Leu Leu Leu Leu Ser Leu  
625 630 635 640

Tyr Glu Asp Asp Ile Thr Phe  
645

<210> 103  
<211> 522  
<212> PRT  
<213> Homo Sapiens

<400> 103

Met Asp Phe Leu Leu Leu Gly Leu Cys Leu Tyr Trp Leu Leu Arg Arg  
1 5 10 15

Pro Ser Gly Val Val Leu Cys Leu Leu Gly Ala Cys Phe Gln Met Leu  
20 25 30

Pro Ala Ala Pro Ser Gly Cys Pro Gln Leu Cys Arg Cys Glu Gly Arg  
35 40 45

Leu Leu Tyr Cys Glu Ala Leu Asn Leu Thr Glu Ala Pro His Asn Leu  
50 55 60

Ser Gly Leu Leu Gly Leu Ser Leu Arg Tyr Asn Ser Leu Ser Glu Leu  
65 70 75 80

Arg Ala Gly Gln Phe Thr Gly Leu Met Gln Leu Thr Trp Leu Tyr Leu  
85 90 95

Asp His Asn His Ile Cys Ser Val Gln Gly Asp Ala Phe Gln Lys Leu  
100 105 110

Arg Arg Val Lys Glu Leu Thr Leu Ser Ser Asn Gln Ile Thr Gln Leu

115		120		125
Pro Asn Thr Thr Phe Arg	Pro Met Pro Asn Leu Arg	Ser Val Asp Leu		
130	135	140		
Ser Tyr Asn Lys Leu Gln Ala	Leu Ala Pro Asp Leu Phe His Gly	Leu		
145	150	155	160	
Arg Lys Leu Thr Thr Leu His Met	Arg Ala Asn Ala Ile Gln Phe Val			
	165	170	175	
Pro Val Arg Ile Phe Gln Asp Cys	Arg Ser Leu Lys Phe Leu Asp Ile			
	180	185	190	
Gly Tyr Asn Gln Leu Lys Ser	Leu Ala Arg Asn Ser Phe Ala Gly	Leu		
	195	200	205	
Phe Lys Leu Thr Glu Leu His Leu Glu His	Asn Asp Leu Val Lys Val			
	210	215	220	
Asn Phe Ala His Phe Pro Arg Leu Ile Ser	Leu His Ser Leu Cys Leu			
225	230	235	240	
Arg Arg Asn Lys Val Ala Ile Val Val Ser	Ser Leu Asp Trp Val Trp			
	245	250	255	
Asn Leu Glu Lys Met Asp Leu Ser Gly	Asn Glu Ile Glu Tyr Met Glu			
	260	265	270	
Pro His Val Phe Glu Thr Val Pro His Leu Gln Ser	Leu Gln Leu Asp			
	275	280	285	
Ser Asn Arg Leu Thr Tyr Ile Glu Pro Arg Ile	Leu Asn Ser Trp Lys			
	290	295	300	
Ser Leu Thr Ser Ile Thr Leu Ala Gly Asn Leu Trp Asp Cys Gly	Arg			
305	310	315	320	
Asn Val Cys Ala Leu Ala Ser Trp Leu Asn Asn Phe Gln Gly Arg Tyr				
	325	330	335	
Asp Gly Asn Leu Gln Cys Ala Ser Pro Glu Tyr Ala Gln Gly Glu Asp				
	340	345	350	
Val Leu Asp Ala Val Tyr Ala Phe His Leu Cys Glu Asp Gly Ala Glu				
	355	360	365	

Pro Thr Ser Gly His Leu Leu Ser Ala Val Thr Asn Arg Ser Asp Leu  
 370 375 380

Gly Pro Pro Ala Ser Ser Ala Thr Thr Leu Ala Asp Gly Gly Glu Gly  
 385 390 395 400

Gln His Asp Gly Thr Phe Glu Pro Ala Thr Val Ala Leu Pro Gly Gly  
 405 410 415

Glu His Ala Glu Asn Ala Val Gln Ile His Lys Val Val Thr Gly Thr  
 420 425 430

Met Ala Leu Ile Phe Ser Phe Leu Ile Val Val Leu Val Leu Tyr Val  
 435 440 445

Ser Trp Lys Cys Phe Pro Ala Ser Leu Arg Gln Leu Arg Gln Cys Phe  
 450 455 460

Val Thr Gln Arg Arg Lys Gln Lys Gln Lys Gln Thr Met His Gln Met  
 465 470 475 480

Ala Ala Met Ser Ala Gln Glu Tyr Tyr Val Asp Tyr Lys Pro Asn His  
 485 490 495

Ile Glu Gly Ala Leu Val Thr Ile Asn Glu Tyr Gly Ser Cys Thr Cys  
 500 505 510

His Gln Gln Pro Ala Arg Glu Cys Glu Val  
 515 520

<210> 104  
 <211> 375  
 <212> PRT  
 <213> Homo Sapiens

<400> 104

Met Ala Asn Ala Ser Glu Pro Gly Gly Ser Gly Gly Gly Glu Ala Ala  
 1 5 10 15

Ala Leu Gly Leu Lys Leu Ala Thr Leu Ser Leu Leu Leu Cys Val Ser  
 20 25 30

Leu Ala Gly Asn Val Leu Phe Ala Leu Leu Ile Val Arg Glu Arg Ser  
 35 40 45



Leu His Arg Ala Pro Tyr Tyr Leu Leu Leu Asp Leu Cys Leu Ala Asp  
 50 55 60  
 Gly Leu Arg Ala Leu Ala Cys Leu Pro Ala Val Met Leu Ala Ala Arg  
 65 70 75 80  
 Arg Ala Ala Ala Ala Ala Gly Ala Pro Pro Gly Ala Leu Gly Cys Lys  
 85 90 95  
 Leu Leu Ala Phe Leu Ala Ala Leu Phe Cys Phe His Ala Ala Phe Leu  
 100 105 110  
 Leu Leu Gly Val Gly Val Thr Arg Tyr Leu Ala Ile Ala His His Arg  
 115 120 125  
 Phe Tyr Ala Glu Arg Leu Ala Gly Trp Pro Cys Ala Ala Met Leu Val  
 130 135 140  
 Cys Ala Ala Trp Ala Leu Ala Leu Ala Ala Ala Phe Pro Pro Val Leu  
 145 150 155 160  
 Asp Gly Gly Gly Asp Asp Glu Asp Ala Pro Cys Ala Leu Glu Gln Arg  
 165 170 175  
 Pro Asp Gly Ala Pro Gly Ala Leu Gly Phe Leu Leu Leu Leu Ala Val  
 180 185 190  
 Val Val Gly Ala Thr His Leu Val Tyr Leu Arg Leu Leu Phe Phe Ile  
 195 200 205  
 His Asp Arg Arg Lys Met Arg Pro Ala Arg Leu Val Pro Ala Val Ser  
 210 215 220  
 His Asp Trp Thr Phe His Gly Pro Gly Ala Thr Gly Gln Ala Ala Ala  
 225 230 235 240  
 Asn Trp Thr Ala Gly Phe Gly Arg Gly Pro Thr Pro Pro Ala Leu Val  
 245 250 255  
 Gly Ile Arg Pro Ala Gly Pro Gly Arg Gly Ala Arg Arg Leu Leu Val  
 260 265 270  
 Leu Glu Glu Phe Lys Thr Glu Lys Arg Leu Cys Lys Met Phe Tyr Ala  
 275 280 285  
 Val Thr Leu Leu Phe Leu Leu Leu Trp Gly Pro Tyr Val Val Ala Ser

290	295	300
Tyr Leu Arg Val Leu Val Arg Pro Gly Ala Val Pro Gln Ala Tyr Leu		
305	310	315 320
Thr Ala Ser Val Trp Leu Thr Phe Ala Gln Ala Gly Ile Asn Pro Val		
	325	330 335
Val Cys Phe Leu Phe Asn Arg Glu Leu Arg Asp Cys Phe Arg Ala Gln		
	340	345 350
Phe Pro Cys Cys Gln Ser Pro Arg Thr Thr Gln Ala Thr His Pro Cys		
	355	360 365
Asp Leu Lys Gly Ile Gly Leu		
	370	375
<210> 105		
<211> 349		
<212> PRT		
<213> Homo Sapiens		
<400> 105		
Met Asn Arg Lys Ala Arg Arg Cys Leu Gly His Leu Phe Leu Ser Leu		
1	5	10 15
Gly Met Val Tyr Leu Arg Ile Gly Gly Phe Ser Ser Val Val Ala Leu		
	20	25 30
Gly Ala Ser Ile Ile Cys Asn Lys Ile Pro Gly Leu Ala Pro Arg Gln		
	35	40 45
Arg Ala Ile Cys Gln Ser Arg Pro Asp Ala Ile Ile Val Ile Gly Glu		
	50	55 60
Gly Ser Gln Met Gly Leu Asp Glu Cys Gln Phe Gln Phe Arg Asn Gly		
65	70	75 80
Arg Trp Asn Cys Ser Ala Leu Gly Glu Arg Thr Val Phe Gly Lys Glu		
	85	90 95
Leu Lys Val Gly Ser Arg Glu Ala Ala Phe Thr Tyr Ala Ile Ile Ala		
	100	105 110
Ala Gly Val Ala His Ala Ile Thr Ala Ala Cys Thr Gln Gly Asn Leu		
	115	120 125

Ser Asp Cys Gly Cys Asp Lys Glu Lys Gln Gly Gln Tyr His Arg Asp  
130 135 140

Glu Gly Trp Lys Trp Gly Gly Cys Ser Ala Asp Ile Arg Tyr Gly Ile  
145 150 155 160

Gly Phe Ala Lys Val Phe Val Asp Ala Arg Glu Ile Lys Gln Asn Ala  
165 170 175

Arg Thr Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg Lys Ile Leu  
180 185 190

Glu Glu Asn Met Lys Leu Glu Cys Lys Cys His Gly Val Ser Gly Ser  
195 200 205

Cys Thr Thr Lys Thr Cys Trp Thr Thr Leu Pro Gln Phe Arg Glu Leu  
210 215 220

Gly Tyr Val Leu Lys Asp Lys Tyr Asn Glu Ala Val His Val Glu Pro  
225 230 235 240

Val Arg Ala Ser Arg Asn Lys Arg Pro Thr Phe Leu Lys Ile Lys Lys  
245 250 255

Pro Leu Ser Tyr Arg Lys Pro Met Asp Thr Asp Leu Val Tyr Ile Glu  
260 265 270

Lys Ser Pro Asn Tyr Cys Glu Glu Asp Pro Val Thr Gly Ser Val Gly  
275 280 285

Thr Gln Gly Arg Ala Cys Asn Lys Thr Ala Pro Gln Ala Ser Gly Cys  
290 295 300

Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Thr His Gln Tyr Ala Arg  
305 310 315 320

Val Trp Gln Cys Asn Cys Lys Phe His Trp Cys Cys Tyr Val Lys Cys  
325 330 335

Asn Thr Cys Ser Glu Arg Thr Glu Met Tyr Thr Cys Lys  
340 345

<210> 106  
<211> 694  
<212> PRT  
<213> Homo Sapiens

<400> 106

Met Glu Trp Gly Tyr Leu Leu Glu Val Thr Ser Leu Leu Ala Ala Leu  
1 5 10 15

Ala Leu Leu Gln Arg Ser Ser Gly Ala Ala Ala Ala Ser Ala Lys Glu  
20 25 30

Leu Ala Cys Gln Glu Ile Thr Val Pro Leu Cys Lys Gly Ile Gly Tyr  
35 40 45

Asn Tyr Thr Tyr Met Pro Asn Gln Phe Asn His Asp Thr Gln Asp Glu  
50 55 60

Ala Gly Leu Glu Val His Gln Phe Trp Pro Leu Val Glu Ile Gln Cys  
65 70 75 80

Ser Pro Asp Leu Lys Phe Phe Leu Cys Ser Met Tyr Thr Pro Ile Cys  
85 90 95

Leu Glu Asp Tyr Lys Lys Pro Leu Pro Pro Cys Arg Ser Val Cys Glu  
100 105 110

Arg Ala Lys Ala Gly Cys Ala Pro Leu Met Arg Gln Tyr Gly Phe Ala  
115 120 125

Trp Pro Asp Arg Met Arg Cys Asp Arg Leu Pro Glu Gln Gly Asn Pro  
130 135 140

Asp Thr Leu Cys Met Asp Tyr Asn Arg Thr Asp Leu Thr Thr Ala Ala  
145 150 155 160

Pro Ser Pro Pro Arg Arg Leu Pro Pro Pro Pro Gly Glu Gln Pro  
165 170 175

Pro Ser Gly Ser Gly His Gly Arg Pro Pro Gly Ala Arg Pro Pro His  
180 185 190

Arg Gly Gly Gly Arg Gly Gly Gly Gly Gly Asp Ala Ala Ala Pro Pro  
195 200 205

Ala Arg Gly Gly Gly Gly Gly Gly Lys Ala Arg Pro Pro Gly Gly Gly  
210 215 220

Ala Ala Pro Cys Glu Pro Gly Cys Gln Cys Arg Ala Pro Met Val Ser  
225 230 235 240

Val Ser Ser Glu Arg His Pro Leu Tyr Asn Arg Val Lys Thr Gly Gln  
 245 250 255

Ile Ala Asn Cys Ala Leu Pro Cys His Asn Pro Phe Phe Ser Gln Asp  
 260 265 270

Glu Arg Ala Phe Thr Val Phe Trp Ile Gly Leu Trp Ser Val Leu Cys  
 275 280 285

Phe Val Ser Thr Phe Ala Thr Val Ser Thr Phe Leu Ile Asp Met Glu  
 290 295 300

Arg Phe Lys Tyr Pro Glu Arg Pro Ile Ile Phe Leu Ser Ala Cys Tyr  
 305 310 315 320

Leu Phe Val Ser Val Gly Tyr Leu Val Arg Leu Val Ala Gly His Glu  
 325 330 335

Lys Val Ala Cys Ser Gly Gly Ala Pro Gly Ala Gly Gly Ala Gly Gly  
 340 345 350

Ala Gly Gly Ala Ala Ala Gly Ala Gly Ala Ala Gly Ala Gly Ala Gly  
 355 360 365

Gly Pro Gly Gly Arg Gly Glu Tyr Glu Glu Leu Gly Ala Val Glu Gln  
 370 375 380

His Val Arg Tyr Glu Thr Thr Gly Pro Ala Leu Cys Thr Val Val Phe  
 385 390 395 400

Leu Leu Val Tyr Phe Phe Gly Met Ala Ser Ser Ile Trp Trp Val Ile  
 405 410 415

Leu Ser Leu Thr Trp Phe Leu Ala Ala Gly Met Lys Trp Gly Asn Glu  
 420 425 430

Ala Ile Ala Gly Tyr Ser Gln Tyr Phe His Leu Ala Ala Trp Leu Val  
 435 440 445

Pro Ser Val Lys Ser Ile Ala Val Leu Ala Leu Ser Ser Val Asp Gly  
 450 455 460

Asp Pro Val Ala Gly Ile Cys Tyr Val Gly Asn Gln Ser Leu Asp Asn  
 465 470 475 480

Leu Arg Gly Phe Val Leu Ala Pro Leu Val Ile Tyr Leu Phe Ile Gly  
485 490 495

Thr Met Phe Leu Leu Ala Gly Phe Val Ser Leu Phe Arg Ile Arg Ser  
500 505 510

Val Ile Lys Gln Gln Asp Gly Pro Thr Lys Thr His Lys Leu Glu Lys  
515 520 525

Leu Met Ile Arg Leu Gly Leu Phe Thr Val Leu Tyr Thr Val Pro Ala  
530 535 540

Ala Val Val Val Ala Cys Leu Phe Tyr Glu Gln His Asn Arg Pro Arg  
545 550 555 560

Trp Glu Ala Thr His Asn Cys Pro Cys Leu Arg Asp Leu Gln Pro Asp  
565 570 575

Gln Ala Arg Arg Pro Asp Tyr Ala Val Phe Met Leu Lys Tyr Phe Met  
580 585 590

Cys Leu Val Val Gly Ile Thr Ser Gly Val Trp Val Trp Ser Gly Lys  
595 600 605

Thr Leu Glu Ser Trp Arg Ser Leu Cys Thr Arg Cys Cys Trp Ala Ser  
610 615 620

Lys Gly Ala Ala Val Gly Gly Gly Ala Gly Ala Thr Ala Ala Gly Gly  
625 630 635 640

Gly Gly Gly Pro Gly Gly Gly Gly Gly Gly Gly Pro Gly Gly Gly Gly  
645 650 655

Gly Pro Gly Gly Gly Gly Gly Ser Leu Tyr Ser Asp Val Ser Thr Gly  
660 665 670

Leu Thr Trp Arg Ser Gly Thr Ala Ser Ser Val Ser Tyr Pro Lys Gln  
675 680 685

Met Pro Leu Ser Gln Val  
690

<210> 107

<211> 295

<212> PRT

<213> Homo Sapiens

<400> 107

Met Leu Gln Gly Pro Gly Ser Leu Leu Leu Leu Phe Leu Ala Ser His  
1 5 10 15

Cys Cys Leu Gly Ser Ala Arg Gly Leu Phe Leu Phe Gly Gln Pro Asp  
20 25 30

Phe Ser Tyr Lys Arg Ser Asn Cys Lys Pro Ile Pro Ala Asn Leu Gln  
35 40 45

Leu Cys His Gly Ile Glu Tyr Gln Asn Met Arg Leu Pro Asn Leu Leu  
50 55 60

Gly His Glu Thr Met Lys Glu Val Leu Glu Gln Ala Gly Ala Trp Ile  
65 70 75 80

Pro Leu Val Met Lys Gln Cys His Pro Asp Thr Lys Lys Phe Leu Cys  
85 90 95

Ser Leu Phe Ala Pro Val Cys Leu Asp Asp Leu Asp Glu Thr Ile Gln  
100 105 110

Pro Cys His Ser Leu Cys Val Gln Val Lys Asp Arg Cys Ala Pro Val  
115 120 125

Met Ser Ala Phe Gly Phe Pro Trp Pro Asp Met Leu Glu Cys Asp Arg  
130 135 140

Phe Pro Gln Asp Asn Asp Leu Cys Ile Pro Leu Ala Ser Ser Asp His  
145 150 155 160

Leu Leu Pro Ala Thr Glu Glu Ala Pro Lys Val Cys Glu Ala Cys Lys  
165 170 175

Asn Lys Asn Asp Asp Asp Asn Asp Ile Met Glu Thr Leu Cys Lys Asn  
180 185 190

Asp Phe Ala Leu Lys Ile Lys Val Lys Glu Ile Thr Tyr Ile Asn Arg  
195 200 205

Asp Thr Lys Ile Ile Leu Glu Thr Lys Ser Lys Thr Ile Tyr Lys Leu  
210 215 220

Asn Gly Val Ser Glu Arg Asp Leu Lys Lys Ser Val Leu Trp Leu Lys  
225 230 235 240

Asp Ser Leu Gln Cys Thr Cys Glu Glu Met Asn Asp Ile Asn Ala Pro  
245 250 255

Tyr Leu Val Met Gly Gln Lys Gln Gly Gly Glu Leu Val Ile Thr Ser  
260 265 270

Val Lys Arg Trp Gln Lys Gly Gln Arg Glu Phe Lys Arg Ile Ser Arg  
275 280 285

Ser Ile Arg Lys Leu Gln Cys  
290 295

<210> 108  
<211> 328  
<212> PRT  
<213> Homo Sapiens

<400> 108

Met Gly Phe Trp Ile Leu Ala Ile Leu Thr Ile Leu Met Tyr Ser Thr  
1 5 10 15

Ala Ala Lys Phe Ser Lys Gln Ser Trp Gly Leu Glu Asn Glu Ala Leu  
20 25 30

Ile Val Arg Cys Pro Arg Gln Gly Lys Pro Ser Tyr Thr Val Asp Trp  
35 40 45

Tyr Tyr Ser Gln Thr Asn Lys Ser Ile Pro Thr Gln Glu Arg Asn Arg  
50 55 60

Val Phe Ala Ser Gly Gln Leu Leu Lys Phe Leu Pro Ala Ala Val Ala  
65 70 75 80

Asp Ser Gly Ile Tyr Thr Cys Ile Val Arg Ser Pro Thr Phe Asn Arg  
85 90 95

Thr Gly Tyr Ala Asn Val Thr Ile Tyr Lys Lys Gln Ser Asp Cys Asn  
100 105 110

Val Pro Asp Tyr Leu Met Tyr Ser Thr Val Ser Gly Ser Glu Lys Asn  
115 120 125

Ser Lys Ile Tyr Cys Pro Thr Ile Asp Leu Tyr Asn Trp Thr Ala Pro  
130 135 140



Leu Glu Trp Phe Lys Asn Cys Gln Ala Leu Gln Gly Ser Arg Tyr Arg  
 145 150 155 160

Ala His Lys Ser Phe Leu Val Ile Asp Asn Val Met Thr Glu Asp Ala  
 165 170 175

Gly Asp Tyr Thr Cys Lys Phe Ile His Asn Glu Asn Gly Ala Asn Tyr  
 180 185 190

Ser Val Thr Ala Thr Arg Ser Phe Thr Val Lys Asp Glu Gln Gly Phe  
 195 200 205

Ser Leu Phe Pro Val Ile Gly Ala Pro Ala Gln Asn Glu Ile Lys Glu  
 210 215 220

Val Glu Ile Gly Lys Asn Ala Asn Leu Thr Cys Ser Ala Cys Phe Gly  
 225 230 235 240

Lys Gly Thr Gln Phe Leu Ala Ala Val Leu Trp Gln Leu Asn Gly Thr  
 245 250 255

Lys Ile Thr Asp Phe Gly Glu Pro Arg Ile Gln Gln Glu Glu Gly Gln  
 260 265 270

Asn Gln Ser Phe Ser Asn Gly Leu Ala Cys Leu Asp Met Val Leu Arg  
 275 280 285

Ile Ala Asp Val Lys Glu Glu Asp Leu Leu Leu Gln Tyr Asp Cys Leu  
 290 295 300

Ala Leu Asn Leu His Gly Leu Arg Arg His Thr Val Arg Leu Ser Arg  
 305 310 315 320

Lys Asn Pro Ser Lys Glu Cys Phe  
 325

<210> 109

<211> 89

<212> PRT

<213> Homo Sapiens

<400> 109

Met Lys Gly Leu Ala Ala Ala Leu Leu Val Leu Val Cys Thr Met Ala  
 1 5 10 15

Leu Cys Ser Cys Ala Gln Val Gly Thr Asn Lys Glu Leu Cys Cys Leu  
 20 25 30

Val Tyr Thr Ser Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr Ser  
 35 40 45

Glu Thr Ser Pro Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr Lys  
 50 55 60

Arg Gly Arg Gln Ile Cys Ala Asp Pro Asn Lys Lys Trp Val Gln Lys  
 65 70 75 80

Tyr Ile Ser Asp Leu Lys Leu Asn Ala  
 85

<210> 110  
 <211> 540  
 <212> PRT  
 <213> Homo Sapiens

<400> 110

Met Ala Thr Ala Pro Gly Pro Ala Gly Ile Ala Met Gly Ser Val Gly  
 1 5 10 15

Ser Leu Leu Glu Arg Gln Asp Phe Ser Pro Glu Glu Leu Arg Ala Ala  
 20 25 30

Leu Ala Gly Ser Arg Gly Ser Arg Gln Pro Asp Gly Leu Leu Arg Lys  
 35 40 45

Gly Leu Gly Gln Arg Glu Phe Leu Ser Tyr Leu His Leu Pro Lys Lys  
 50 55 60

Asp Ser Lys Ser Thr Lys Asn Thr Lys Arg Ala Pro Arg Asn Glu Pro  
 65 70 75 80

Ala Asp Tyr Ala Thr Leu Tyr Tyr Arg Glu His Ser Arg Ala Gly Asp  
 85 90 95

Phe Ser Lys Thr Ser Leu Pro Glu Arg Gly Arg Phe Asp Lys Cys Arg  
 100 105 110

Ile Arg Pro Ser Val Phe Lys Pro Thr Ala Gly Asn Gly Lys Gly Phe  
 115 120 125

Leu Ser Met Gln Ser Leu Ala Ser His Lys Gly Gln Lys Leu Trp Arg  
 130 135 140

Ser Asn Gly Ser Leu His Thr Leu Ala Cys His Pro Pro Leu Ser Pro  
 145 150 155 160  
 Gly Pro Arg Ala Ser Gln Ala Arg Ala Gln Leu Leu His Ala Leu Ser  
 165 170 175  
 Leu Asp Glu Gly Gly Pro Glu Pro Glu Pro Ser Leu Ser Asp Ser Ser  
 180 185 190  
 Ser Gly Gly Ser Phe Gly Arg Ser Pro Gly Thr Gly Pro Ser Pro Phe  
 195 200 205  
 Ser Ser Ser Leu Gly His Leu Asn His Leu Gly Gly Ser Leu Asp Arg  
 210 215 220  
 Ala Ser Gln Gly Pro Lys Glu Ala Gly Pro Pro Ala Val Leu Ser Cys  
 225 230 235 240  
 Leu Pro Glu Pro Pro Pro Pro Tyr Glu Phe Ser Cys Ser Ser Ala Glu  
 245 250 255  
 Glu Met Gly Ala Val Leu Pro Glu Thr Cys Glu Glu Leu Lys Arg Gly  
 260 265 270  
 Leu Gly Asp Glu Asp Gly Ser Asn Pro Phe Thr Gln Val Leu Glu Glu  
 275 280 285  
 Arg Gln Arg Leu Trp Leu Ala Glu Leu Lys Arg Leu Tyr Val Glu Arg  
 290 295 300  
 Leu His Glu Val Thr Gln Lys Ala Glu Arg Ser Glu Arg Asn Leu Gln  
 305 310 315 320  
 Leu Gln Leu Phe Met Ala Gln Gln Glu Gln Arg Arg Leu Arg Lys Glu  
 325 330 335  
 Leu Arg Ala Gln Gln Gly Leu Ala Pro Glu Pro Arg Ala Pro Gly Thr  
 340 345 350  
 Leu Pro Glu Ala Asp Pro Ser Ala Arg Pro Glu Glu Glu Ala Arg Trp  
 355 360 365  
 Glu Val Cys Gln Lys Thr Ala Glu Ile Ser Leu Leu Lys Gln Gln Leu  
 370 375 380  
 Arg Glu Ala Gln Ala Glu Leu Ala Gln Lys Leu Ala Glu Ile Phe Ser

385                                      390                                      395                                      400  
 Leu Lys Thr Gln Leu Arg Gly Ser Arg Ala Gln Ala Gln Ala Gln Asp  
    405                                      410                                      415  
 Ala Glu Leu Val Arg Leu Arg Glu Ala Val Arg Ser Leu Gln Glu Gln  
    420                                      425                                      430  
 Ala Pro Arg Glu Glu Ala Pro Gly Ser Cys Glu Thr Asp Asp Cys Lys  
    435                                      440                                      445  
 Ser Arg Gly Leu Leu Gly Glu Ala Gly Gly Ser Glu Ala Arg Asp Ser  
    450                                      455                                      460  
 Ala Glu Gln Leu Arg Ala Glu Leu Leu Gln Glu Arg Leu Arg Gly Gln  
    465                                      470                                      475                                      480  
 Glu Gln Ala Leu Arg Phe Glu Gln Glu Arg Arg Thr Trp Gln Glu Glu  
    485                                      490                                      495  
 Lys Glu Arg Val Leu Arg Tyr Gln Arg Glu Ile Gln Gly Gly Tyr Met  
    500                                      505                                      510  
 Asp Met Tyr Arg Arg Asn Gln Ala Leu Glu Gln Glu Leu Arg Ala Leu  
    515                                      520                                      525  
 Arg Glu Pro Pro Thr Pro Trp Ser Pro Arg Leu Glu  
    530                                      535                                      540  
  
 <210> 111  
 <211> 673  
 <212> PRT  
 <213> Homo Sapiens  
  
 <400> 111  
 Met Pro Gly Gln Lys Phe Phe Leu Glu Val Leu Cys Cys Pro Ser Lys  
 1                                      5                                      10                                      15  
 Asn Trp Arg Ser Ser Ala Ala Glu Arg Val Pro Pro Ser Pro Ile Arg  
    20                                      25                                      30  
 Leu Arg Arg Arg Arg Pro Pro Ala Phe Ser Arg Arg Leu Pro Leu Arg  
    35                                      40                                      45  
 Arg Ser Asp Pro Ala Arg Ser Pro Gly Pro Ser Arg Arg Leu Ala Gly  
    50                                      55                                      60

Gly Phe Lys Ser Ala Arg Gly Ser Cys Asp Ala Gln Gly Leu Arg Ser  
 65 70 75 80

Arg Gly Pro Ala Ser Ala Ser Pro Pro Trp Ala Ala Val Ser Ser Ile  
 85 90 95

Ser Thr Lys Asp Trp Ser Glu Ser Asn Ser Ser Pro Cys Ser Glu Ile  
 100 105 110

Pro Val Leu Pro Ala Asn Leu Gly Asp Trp Arg Gly Ile Trp Trp Gly  
 115 120 125

Thr Trp Gln Glu Ala Pro Gly Pro Ala Gly Ile Ala Met Gly Ser Val  
 130 135 140

Gly Ser Leu Leu Glu Arg Gln Asp Phe Ser Pro Glu Glu Leu Arg Ala  
 145 150 155 160

Ala Leu Ala Gly Ser Arg Gly Ser Arg Gln Pro Asp Gly Leu Leu Arg  
 165 170 175

Lys Gly Leu Gly Gln Arg Glu Phe Leu Ser Tyr Leu His Leu Pro Lys  
 180 185 190

Lys Asp Ser Lys Ser Thr Lys Asn Thr Lys Arg Ala Pro Arg Asn Glu  
 195 200 205

Pro Ala Asp Tyr Ala Thr Leu Tyr Tyr Arg Glu His Ser Arg Ala Gly  
 210 215 220

Asp Phe Ser Lys Thr Ser Leu Pro Glu Arg Gly Arg Phe Asp Lys Cys  
 225 230 235 240

Arg Ile Arg Pro Ser Val Phe Lys Pro Thr Ala Gly Asn Gly Lys Gly  
 245 250 255

Phe Leu Ser Met Gln Ser Leu Ala Ser His Lys Gly Gln Lys Leu Trp  
 260 265 270

Arg Ser Asn Gly Ser Leu His Thr Leu Ala Cys His Pro Pro Leu Ser  
 275 280 285

Pro Gly Pro Arg Ala Ser Gln Ala Arg Ala Gln Leu Leu His Ala Leu  
 290 295 300

Ser Leu Asp Glu Gly Gly Pro Glu Pro Glu Pro Ser Leu Ser Asp Ser  
 305 310 315 320

Ser Ser Gly Gly Ser Phe Gly Arg Ser Pro Gly Thr Gly Pro Ser Pro  
 325 330 335

Phe Ser Ser Ser Leu Gly His Leu Asn His Leu Gly Gly Ser Leu Asp  
 340 345 350

Arg Ala Ser Gln Gly Pro Lys Glu Ala Gly Pro Pro Ala Val Leu Ser  
 355 360 365

Cys Leu Pro Glu Pro Pro Pro Pro Tyr Glu Phe Ser Cys Ser Ser Ala  
 370 375 380

Glu Glu Met Gly Ala Val Leu Pro Glu Thr Cys Glu Glu Leu Lys Arg  
 385 390 395 400

Gly Leu Gly Asp Glu Asp Gly Ser Asn Pro Phe Thr Gln Val Leu Glu  
 405 410 415

Glu Arg Gln Arg Leu Trp Leu Ala Glu Leu Lys Arg Leu Tyr Val Glu  
 420 425 430

Arg Leu His Glu Val Thr Gln Lys Ala Glu Arg Ser Glu Arg Asn Leu  
 435 440 445

Gln Leu Gln Leu Phe Met Ala Gln Gln Glu Gln Arg Arg Leu Arg Lys  
 450 455 460

Glu Leu Arg Ala Gln Gln Gly Leu Ala Pro Glu Pro Arg Ala Pro Gly  
 465 470 475 480

Thr Leu Pro Glu Ala Asp Pro Ser Ala Arg Pro Glu Glu Glu Ala Arg  
 485 490 495

Trp Glu Val Cys Gln Lys Thr Ala Glu Ile Ser Leu Leu Lys Gln Gln  
 500 505 510

Leu Arg Glu Ala Gln Ala Glu Leu Ala Gln Lys Leu Ala Glu Ile Phe  
 515 520 525

Ser Leu Lys Thr Gln Leu Arg Gly Ser Arg Ala Gln Ala Gln Ala Gln  
 530 535 540

Asp Ala Glu Leu Val Arg Leu Arg Glu Ala Val Arg Ser Leu Gln Glu



Cys Asn Val Arg Glu Ser Ser Gln Asn Asn Trp Leu Arg Thr Gly Phe  
                     85                    90                    95

Ile Trp Arg Arg Asp Val Gln Arg Val Tyr Val Glu Leu Lys Phe Thr  
                     100                    105                    110

Val Arg Asp Cys Asn Ser Ile Pro Asn Ile Pro Gly Ser Cys Lys Glu  
                     115                    120                    125

Thr Phe Asn Leu Phe Tyr Tyr Glu Ala Asp Ser Asp Val Ala Ser Ala  
                     130                    135                    140

Ser Ser Pro Phe Trp Met Glu Asn Pro Tyr Val Lys Val Asp Thr Ile  
 145                    150                    155                    160

Ala Pro Asp Glu Ser Phe Ser Arg Leu Asp Ala Gly Arg Val Asn Thr  
                     165                    170                    175

Lys Val Arg Ser Phe Gly Pro Leu Ser Lys Ala Gly Phe Tyr Leu Ala  
                     180                    185                    190

Phe Gln Asp Gln Gly Ala Cys Met Ser Leu Ile Ser Val Arg Ala Phe  
                     195                    200                    205

Tyr Lys Lys Cys Ala Ser Thr Thr Ala Gly Phe Ala Leu Phe Pro Glu  
                     210                    215                    220

Thr Leu Thr Gly Ala Glu Pro Thr Ser Leu Val Ile Ala Pro Gly Thr  
 225                    230                    235                    240

Cys Ile Pro Asn Ala Val Glu Val Ser Val Pro Leu Lys Leu Tyr Cys  
                     245                    250                    255

Asn Gly Asp Gly Glu Trp Met Val Pro Val Gly Ala Cys Thr Cys Ala  
                     260                    265                    270

Thr Gly His Glu Pro Ala Ala Lys Glu Ser Gln Cys Arg Pro Cys Pro  
                     275                    280                    285

Pro Gly Ser Tyr Lys Ala Lys Gln Gly Glu Gly Pro Cys Leu Pro Cys  
                     290                    295                    300

Pro Pro Asn Ser Arg Thr Thr Ser Pro Ala Ala Ser Ile Cys Thr Cys  
 305                    310                    315                    320





565	570	575
Ile Ala Ile Val Cys Leu Arg Lys Gln Arg His Gly Ser Asp Ser Glu 580 585 590		
Tyr Thr Glu Lys Leu Gln Gln Tyr Ile Ala Pro Gly Met Lys Val Tyr 595 600 605		
Ile Asp Pro Phe Thr Tyr Glu Asp Pro Asn Glu Ala Val Arg Glu Phe 610 615 620		
Ala Lys Glu Ile Asp Val Ser Cys Val Lys Ile Glu Glu Val Ile Gly 625 630 635 640		
Ala Gly Glu Phe Gly Glu Val Cys Arg Gly Arg Leu Lys Gln Pro Gly 645 650 655		
Arg Arg Glu Val Phe Val Ala Ile Lys Thr Leu Lys Val Gly Tyr Thr 660 665 670		
Glu Arg Gln Arg Arg Asp Phe Leu Ser Glu Ala Ser Ile Met Gly Gln 675 680 685		
Phe Asp His Pro Asn Ile Ile Arg Leu Glu Gly Val Val Thr Lys Ser 690 695 700		
Arg Pro Val Met Ile Leu Thr Glu Phe Met Glu Asn Cys Ala Leu Asp 705 710 715 720		
Ser Phe Leu Arg Leu Asn Asp Gly Gln Phe Thr Val Ile Gln Leu Val 725 730 735		
Gly Met Leu Arg Gly Ile Ala Ala Gly Met Lys Tyr Leu Ser Glu Met 740 745 750		
Asn Tyr Val His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val Asn Ser 755 760 765		
Asn Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Phe Leu Glu 770 775 780		
Asp Asp Pro Ser Asp Pro Thr Tyr Thr Ser Ser Leu Gly Gly Lys Ile 785 790 795 800		
Pro Ile Arg Trp Thr Ala Pro Glu Ala Ile Ala Tyr Arg Lys Phe Thr 805 810 815		

Ser Ala Ser Asp Val Trp Ser Tyr Gly Ile Val Met Trp Glu Val Met  
820 825 830

Ser Tyr Gly Glu Arg Pro Tyr Trp Asp Met Ser Asn Gln Asp Val Ile  
835 840 845

Asn Ala Val Glu Gln Asp Tyr Arg Leu Pro Pro Pro Met Asp Cys Pro  
850 855 860

Thr Ala Leu His Gln Leu Met Leu Asp Cys Trp Val Arg Asp Arg Asn  
865 870 875 880

Leu Arg Pro Lys Phe Ser Gln Ile Val Asn Thr Leu Asp Lys Leu Ile  
885 890 895

Arg Asn Ala Ala Ser Leu Lys Val Ile Ala Ser Ala Gln Ser Gly Met  
900 905 910

Ser Gln Pro Leu Leu Asp Arg Thr Val Pro Asp Tyr Thr Thr Phe Thr  
915 920 925

Thr Val Gly Asp Trp Leu Asp Ala Ile Lys Met Gly Arg Tyr Lys Glu  
930 935 940

Ser Phe Val Ser Ala Gly Phe Ala Ser Phe Asp Leu Val Ala Gln Met  
945 950 955 960

Thr Ala Glu Asp Leu Leu Arg Ile Gly Val Thr Leu Ala Gly His Gln  
965 970 975

Lys Lys Ile Leu Ser Ser Ile Gln Asp Met Arg Leu Gln Met Asn Gln  
980 985 990

Thr Leu Pro Val Gln Val  
995

<210> 113  
<211> 413  
<212> PRT  
<213> Homo Sapiens

<400> 113

Met Gly Gly Thr Thr Leu Ala Trp Ser Met Ala Arg Asp Ser Ala Gly  
1 5 10 15

Leu Val Ala Gly Asn Leu Asp Leu Ser Glu Lys His Asp Pro Arg Pro  
 20 25 30

Pro Pro Leu Leu His Pro Pro Gly Pro Thr Ala Val Leu Ala Gly Asp  
 35 40 45

Gly Ser Phe Arg Lys Cys Ala Glu Lys Ser Thr Phe Pro Cys Gln Ala  
 50 55 60

Thr Ala Arg Glu Leu Thr Pro Leu Phe Glu Pro Cys Gln Pro Pro His  
 65 70 75 80

Leu Val Gly Arg Val Lys Gly Arg Glu Val Asn Thr Ala Pro Thr Pro  
 85 90 95

Leu Pro Cys Arg Pro Ser Gly Arg Pro Val Ala Gly Gly Gly Gly Asp  
 100 105 110

Gly Pro Gly Gly Pro Glu Pro Gly Trp Val Asp Pro Arg Thr Trp Leu  
 115 120 125

Ser Phe Gln Gly Pro Pro Gly Gly Pro Gly Ile Gly Pro Gly Val Gly  
 130 135 140

Pro Gly Ser Glu Val Trp Gly Ile Pro Pro Cys Pro Pro Pro Tyr Glu  
 145 150 155 160

Phe Cys Gly Gly Met Ala Tyr Cys Gly Pro Gln Val Gly Val Gly Leu  
 165 170 175

Val Pro Gln Gly Gly Leu Glu Thr Ser Gln Pro Glu Gly Glu Ala Gly  
 180 185 190

Val Gly Val Glu Ser Asn Ser Asp Gly Ala Ser Pro Glu Pro Cys Thr  
 195 200 205

Val Thr Pro Gly Ala Val Lys Leu Glu Lys Glu Lys Leu Glu Gln Asn  
 210 215 220

Pro Glu Glu Ala Arg Lys Val Phe Ser Gln Thr Thr Ile Cys Arg Phe  
 225 230 235 240

Glu Ala Leu Gln Leu Ser Phe Lys Asn Met Cys Lys Leu Arg Pro Leu  
 245 250 255

Leu Gln Lys Trp Val Glu Glu Ala Asp Asn Asn Glu Asn Leu Gln Glu

260					265					270					
Ile	Cys	Lys	Ala	Glu	Thr	Leu	Val	Gln	Ala	Arg	Lys	Arg	Lys	Arg	Thr
	275						280					285			
Ser	Ile	Glu	Asn	Arg	Val	Arg	Gly	Asn	Leu	Glu	Asn	Leu	Phe	Leu	Gln
	290					295					300				
Cys	Pro	Lys	Pro	Thr	Leu	Gln	Gln	Ile	Ser	His	Ile	Ala	Gln	Gln	Leu
305					310					315					320
Gly	Leu	Glu	Lys	Asp	Val	Val	Arg	Val	Trp	Phe	Cys	Asn	Arg	Arg	Gln
				325					330					335	
Lys	Gly	Lys	Arg	Ser	Ser	Ser	Asp	Tyr	Ala	Gln	Arg	Glu	Asp	Phe	Glu
			340					345					350		
Ala	Ala	Gly	Ser	Pro	Phe	Ser	Gly	Gly	Pro	Val	Ser	Phe	Pro	Leu	Ala
		355					360					365			
Pro	Gly	Pro	His	Phe	Gly	Thr	Pro	Gly	Tyr	Gly	Ser	Pro	His	Phe	Thr
	370					375					380				
Ala	Leu	Tyr	Ser	Ser	Val	Pro	Phe	Pro	Glu	Gly	Glu	Ala	Phe	Pro	Pro
385					390					395					400
Val	Ser	Val	Thr	Thr	Leu	Gly	Ser	Pro	Met	His	Ser	Asn			
				405					410						
<210> 114															
<211> 360															
<212> PRT															
<213> Homo Sapiens															
<400> 114															
Met	Ala	Gly	His	Leu	Ala	Ser	Asp	Phe	Ala	Phe	Ser	Pro	Pro	Pro	Gly
1				5					10					15	
Gly	Gly	Gly	Asp	Gly	Pro	Gly	Gly	Pro	Glu	Pro	Gly	Trp	Val	Asp	Pro
			20					25					30		
Arg	Thr	Trp	Leu	Ser	Phe	Gln	Gly	Pro	Pro	Gly	Gly	Pro	Gly	Ile	Gly
		35					40					45			
Pro	Gly	Val	Gly	Pro	Gly	Ser	Glu	Val	Trp	Gly	Ile	Pro	Pro	Cys	Pro
	50					55					60				

Pro Pro Tyr Glu Phe Cys Gly Gly Met Ala Tyr Cys Gly Pro Gln Val  
 65 70 75 80

Gly Val Gly Leu Val Pro Gln Gly Gly Leu Glu Thr Ser Gln Pro Glu  
 85 90 95

Gly Glu Ala Gly Val Gly Val Glu Ser Asn Ser Asp Gly Ala Ser Pro  
 100 105 110

Glu Pro Cys Thr Val Thr Pro Gly Ala Val Lys Leu Glu Lys Glu Lys  
 115 120 125

Leu Glu Gln Asn Pro Glu Glu Ser Gln Asp Ile Lys Ala Leu Gln Lys  
 130 135 140

Glu Leu Glu Gln Phe Ala Lys Leu Leu Lys Gln Lys Arg Ile Thr Leu  
 145 150 155 160

Gly Tyr Thr Gln Ala Asp Val Gly Leu Thr Leu Gly Val Leu Phe Gly  
 165 170 175

Lys Val Phe Ser Gln Thr Thr Ile Cys Arg Phe Glu Ala Leu Gln Leu  
 180 185 190

Ser Phe Lys Asn Met Cys Lys Leu Arg Pro Leu Leu Gln Lys Trp Val  
 195 200 205

Glu Glu Ala Asp Asn Asn Glu Asn Leu Gln Glu Ile Cys Lys Ala Glu  
 210 215 220

Thr Leu Val Gln Ala Arg Lys Arg Lys Arg Thr Ser Ile Glu Asn Arg  
 225 230 235 240

Val Arg Gly Asn Leu Glu Asn Leu Phe Leu Gln Cys Pro Lys Pro Thr  
 245 250 255

Leu Gln Gln Ile Ser His Ile Ala Gln Gln Leu Gly Leu Glu Lys Asp  
 260 265 270

Val Val Arg Val Trp Phe Cys Asn Arg Arg Gln Lys Gly Lys Arg Ser  
 275 280 285

Ser Ser Asp Tyr Ala Gln Arg Glu Asp Phe Glu Ala Ala Gly Ser Pro  
 290 295 300

Phe Ser Gly Gly Pro Val Ser Phe Pro Leu Ala Pro Gly Pro His Phe  
 305 310 315 320

Gly Thr Pro Gly Tyr Gly Ser Pro His Phe Thr Ala Leu Tyr Ser Ser  
 325 330 335

Val Pro Phe Pro Glu Gly Glu Ala Phe Pro Pro Val Ser Val Thr Thr  
 340 345 350

Leu Gly Ser Pro Met His Ser Asn  
 355 360

<210> 115  
 <211> 529  
 <212> PRT  
 <213> Homo Sapiens

<400> 115

Met Ser Val Lys Trp Thr Ser Val Ile Leu Leu Ile Gln Leu Ser Phe  
 1 5 10 15

Cys Phe Ser Ser Gly Asn Cys Gly Lys Val Leu Val Trp Ala Ala Glu  
 20 25 30

Tyr Ser His Trp Met Asn Ile Lys Thr Ile Leu Asp Glu Leu Ile Gln  
 35 40 45

Arg Gly His Glu Val Thr Val Leu Ala Ser Ser Ala Ser Ile Leu Phe  
 50 55 60

Asp Pro Asn Asn Ser Ser Ala Leu Lys Ile Glu Ile Tyr Pro Thr Ser  
 65 70 75 80

Leu Thr Lys Thr Glu Leu Glu Asn Phe Ile Met Gln Gln Ile Lys Arg  
 85 90 95

Trp Ser Asp Leu Pro Lys Asp Thr Phe Trp Leu Tyr Phe Ser Gln Val  
 100 105 110

Gln Glu Ile Met Ser Ile Phe Gly Asp Ile Thr Arg Lys Phe Cys Lys  
 115 120 125

Asp Val Val Ser Asn Lys Lys Phe Met Lys Lys Val Gln Glu Ser Arg  
 130 135 140

Phe Asp Val Ile Phe Ala Asp Ala Ile Phe Pro Cys Ser Glu Leu Leu  
 145 150 155 160

Ala Glu Leu Phe Asn Ile Pro Phe Val Tyr Ser Leu Ser Phe Ser Pro  
 165 170 175

Gly Tyr Thr Phe Glu Lys His Ser Gly Gly Phe Ile Phe Pro Pro Ser  
 180 185 190

Tyr Val Pro Val Val Met Ser Glu Leu Thr Asp Gln Met Thr Phe Met  
 195 200 205

Glu Arg Val Lys Asn Met Ile Tyr Val Leu Tyr Phe Asp Phe Trp Phe  
 210 215 220

Glu Ile Phe Asp Met Lys Lys Trp Asp Gln Phe Tyr Ser Glu Val Leu  
 225 230 235 240

Gly Arg Pro Thr Thr Leu Ser Glu Thr Met Gly Lys Ala Asp Val Trp  
 245 250 255

Leu Ile Arg Asn Ser Trp Asn Phe Gln Phe Pro His Pro Leu Leu Pro  
 260 265 270

Asn Val Asp Phe Val Gly Gly Leu His Cys Lys Pro Ala Lys Pro Leu  
 275 280 285

Pro Lys Glu Met Glu Asp Phe Val Gln Ser Ser Gly Glu Asn Gly Val  
 290 295 300

Val Val Phe Ser Leu Gly Ser Met Val Ser Asn Met Thr Glu Glu Arg  
 305 310 315 320

Ala Asn Val Ile Ala Ser Ala Leu Ala Gln Ile Pro Gln Lys Val Leu  
 325 330 335

Trp Arg Phe Asp Gly Asn Lys Pro Asp Thr Leu Gly Leu Asn Thr Arg  
 340 345 350

Leu Tyr Lys Trp Ile Pro Gln Asn Asp Leu Leu Gly His Pro Lys Thr  
 355 360 365

Arg Ala Phe Ile Thr His Gly Gly Ala Asn Gly Ile Tyr Glu Ala Ile  
 370 375 380

Tyr His Gly Ile Pro Met Val Gly Ile Pro Leu Phe Ala Asp Gln Pro  
 385 390 395 400



Asp Asn Ile Ala His Met Lys Ala Arg Gly Ala Ala Val Arg Val Asp  
405 410 415

Phe Asn Thr Met Ser Ser Thr Asp Leu Leu Asn Ala Leu Lys Arg Val  
420 425 430

Ile Asn Asp Pro Ser Tyr Lys Glu Asn Val Met Lys Leu Ser Arg Ile  
435 440 445

Gln His Asp Gln Pro Val Lys Pro Leu Asp Arg Ala Val Phe Trp Ile  
450 455 460

Glu Phe Val Met Arg His Lys Gly Ala Lys His Leu Arg Val Ala Ala  
465 470 475 480

His Asp Leu Thr Trp Phe Gln Tyr His Ser Leu Asp Val Ile Gly Phe  
485 490 495

Leu Leu Val Cys Val Ala Thr Val Ile Phe Ile Val Thr Lys Cys Cys  
500 505 510

Leu Phe Cys Phe Trp Lys Phe Ala Arg Lys Ala Lys Lys Gly Lys Asn  
515 520 525

Asp

<210> 116  
<211> 2872  
<212> PRT  
<213> Homo Sapiens

<400> 116

Met Leu Gln Cys Thr Pro Ala Asn Met Val Glu Val His Lys Asp Lys  
1 5 10 15

Glu Ser Ser Lys Gly His Thr Arg His Lys Val Glu Glu Ala Leu Ile  
20 25 30

Asn Glu Glu Ala Ile Leu Asn Leu Met Glu Asn Ser Gln Thr Phe Gln  
35 40 45

Pro Leu Thr Gln Arg Leu Ser Glu Ser Pro Val Phe Met Asp Ser Ser  
50 55 60

Pro Asp Glu Ala Leu Val His Leu Leu Ala Gly Leu Glu Ser Asp Gly

65		70		75		80									
Tyr	Arg	Gly	Glu	Arg	Asn	Arg	Met	Pro	Ser	Pro	Cys	Arg	Ser	Phe	Gly
			85						90					95	
Asn	Asn	Lys	Tyr	Pro	Gln	Asn	Ser	Asp	Asp	Glu	Glu	Asn	Glu	Pro	Gln
			100					105					110		
Ile	Glu	Lys	Glu	Glu	Met	Glu	Leu	Ser	Leu	Val	Met	Ser	Gln	Arg	Trp
		115					120					125			
Asp	Ser	Asn	Ile	Glu	Glu	His	Cys	Ala	Lys	Lys	Arg	Ser	Leu	Cys	Arg
	130					135					140				
Asn	Thr	His	Arg	Ser	Ser	Thr	Glu	Asp	Asp	Asp	Ser	Ser	Ser	Gly	Glu
145					150					155					160
Glu	Met	Glu	Trp	Ser	Asp	Asn	Ser	Leu	Leu	Leu	Ala	Ser	Leu	Ser	Ile
			165					170						175	
Pro	Gln	Leu	Asp	Gly	Thr	Ala	Asp	Glu	Asn	Ser	Asp	Asn	Pro	Leu	Asn
		180						185					190		
Asn	Glu	Asn	Ser	Arg	Thr	His	Ser	Ser	Val	Ile	Ala	Thr	Ser	Lys	Leu
	195						200					205			
Ser	Val	Lys	Pro	Ser	Ile	Phe	His	Lys	Asp	Ala	Ala	Thr	Leu	Glu	Pro
	210					215					220				
Ser	Ser	Ser	Ala	Lys	Ile	Thr	Phe	Gln	Cys	Lys	His	Thr	Ser	Ala	Leu
225					230					235					240
Ser	Ser	His	Val	Leu	Asn	Lys	Glu	Asp	Leu	Ile	Glu	Asp	Leu	Ser	Gln
			245						250					255	
Thr	Asn	Lys	Asn	Thr	Glu	Lys	Gly	Leu	Asp	Asn	Ser	Val	Thr	Ser	Phe
		260						265					270		
Thr	Asn	Glu	Ser	Thr	Tyr	Ser	Met	Lys	Tyr	Pro	Gly	Ser	Leu	Ser	Ser
		275					280					285			
Thr	Val	His	Ser	Glu	Asn	Ser	His	Lys	Glu	Asn	Ser	Lys	Lys	Glu	Ile
	290					295					300				
Leu	Pro	Val	Ser	Ser	Cys	Glu	Ser	Ser	Ile	Phe	Asp	Tyr	Glu	Glu	Asp
305					310					315					320

Ile Pro Ser Val Thr Arg Gln Val Pro Ser Arg Lys Tyr Thr Asn Ile  
 325 330 335

Arg Lys Ile Glu Lys Asp Ser Pro Phe Ile His Met His Arg His Pro  
 340 345 350

Asn Glu Asn Thr Leu Gly Lys Asn Ser Phe Asn Phe Ser Asp Leu Asn  
 355 360 365

His Ser Lys Asn Lys Val Ser Ser Glu Gly Asn Glu Lys Gly Asn Ser  
 370 375 380

Thr Ala Leu Ser Ser Leu Phe Pro Ser Ser Phe Thr Glu Asn Cys Glu  
 385 390 395 400

Leu Leu Ser Cys Ser Gly Glu Asn Arg Thr Met Val His Ser Leu Asn  
 405 410 415

Ser Thr Ala Asp Glu Ser Gly Leu Asn Lys Leu Lys Ile Arg Tyr Glu  
 420 425 430

Glu Phe Gln Glu His Lys Thr Glu Lys Pro Ser Leu Ser Gln Gln Ala  
 435 440 445

Ala His Tyr Met Phe Phe Pro Ser Val Val Leu Ser Asn Cys Leu Thr  
 450 455 460

Arg Pro Gln Lys Leu Ser Pro Val Thr Tyr Lys Leu Gln Pro Gly Asn  
 465 470 475 480

Lys Pro Ser Arg Leu Lys Leu Asn Lys Arg Lys Leu Ala Gly His Gln  
 485 490 495

Glu Thr Ser Thr Lys Ser Ser Glu Thr Gly Ser Thr Lys Asp Asn Phe  
 500 505 510

Ile Gln Asn Asn Pro Cys Asn Ser Asn Pro Glu Lys Asp Asn Ala Leu  
 515 520 525

Ala Ser Asp Leu Thr Lys Thr Thr Arg Gly Ala Phe Glu Asn Lys Thr  
 530 535 540

Pro Thr Asp Gly Phe Ile Asp Cys His Phe Gly Asp Gly Thr Leu Glu  
 545 550 555 560

Thr Glu Gln Ser Phe Gly Leu Tyr Gly Asn Lys Tyr Thr Leu Arg Ala  
565 570 575

Lys Arg Lys Val Asn Tyr Glu Thr Glu Asp Ser Glu Ser Ser Phe Val  
580 585 590

Thr His Asn Ser Lys Ile Ser Leu Pro His Pro Met Glu Ile Gly Glu  
595 600 605

Ser Leu Asp Gly Thr Leu Lys Ser Arg Lys Arg Arg Lys Met Ser Lys  
610 615 620

Lys Leu Pro Pro Val Ile Ile Lys Tyr Ile Ile Ile Asn Arg Phe Arg  
625 630 635 640

Gly Arg Lys Asn Met Leu Val Lys Leu Gly Lys Ile Asp Ser Lys Glu  
645 650 655

Lys Gln Val Ile Leu Thr Glu Glu Lys Met Glu Leu Tyr Lys Lys Leu  
660 665 670

Ala Pro Leu Lys Asp Phe Trp Pro Lys Val Pro Asp Ser Pro Ala Thr  
675 680 685

Lys Tyr Pro Ile Tyr Pro Leu Thr Pro Lys Lys Ser His Arg Arg Lys  
690 695 700

Ser Lys His Lys Ser Ala Lys Lys Lys Thr Gly Lys Gln Gln Arg Thr  
705 710 715 720

Asn Asn Glu Asn Ile Lys Arg Thr Leu Ser Phe Arg Lys Lys Arg Ser  
725 730 735

His Ala Ile Leu Ser Pro Pro Ser Pro Ser Tyr Asn Ala Glu Thr Glu  
740 745 750

Asp Cys Asp Leu Asn Tyr Ser Asp Val Met Ser Lys Leu Gly Phe Leu  
755 760 765

Ser Glu Arg Ser Thr Ser Pro Ile Asn Ser Ser Pro Pro Arg Cys Trp  
770 775 780

Ser Pro Thr Asp Pro Arg Ala Glu Glu Ile Met Ala Ala Ala Glu Lys  
785 790 795 800

Glu Ala Met Leu Phe Lys Gly Pro Asn Val Tyr Lys Lys Thr Val Asn  
                             805                            810                            815

Ser Arg Ile Gly Lys Thr Ser Arg Ala Arg Ala Gln Ile Lys Lys Ser  
                             820                            825                            830

Lys Ala Lys Leu Ala Asn Pro Ser Ile Val Thr Lys Lys Arg Asn Lys  
                             835                            840                            845

Arg Asn Gln Thr Asn Lys Leu Val Asp Asp Gly Lys Lys Lys Pro Arg  
                             850                            855                            860

Ala Lys Gln Lys Thr Asn Glu Lys Gly Thr Ser Arg Lys His Thr Thr  
                             865                            870                            875                            880

Leu Lys Asp Glu Lys Ile Lys Ser Gln Ser Gly Ala Glu Val Lys Phe  
                             885                            890                            895

Val Leu Lys His Gln Asn Val Ser Glu Phe Ala Ser Ser Ser Gly Gly  
                             900                            905                            910

Ser Gln Leu Leu Phe Lys Gln Lys Asp Met Pro Leu Met Gly Ser Ala  
                             915                            920                            925

Val Asp His Pro Leu Ser Ala Ser Leu Pro Thr Gly Ile Asn Ala Gln  
                             930                            935                            940

Gln Lys Leu Ser Gly Cys Phe Ser Ser Phe Leu Glu Ser Lys Lys Ser  
                             945                            950                            955                            960

Val Asp Leu Gln Thr Phe Pro Ser Ser Arg Asp Asp Leu His Pro Ser  
                             965                            970                            975

Val Val Cys Asn Ser Ile Gly Pro Gly Val Ser Lys Ile Asn Val Gln  
                             980                            985                            990

Arg Pro His Asn Gln Ser Ala Met Phe Thr Leu Lys Glu Ser Thr Leu  
                             995                            1000                            1005

Ile Gln Lys Asn Ile Phe Asp Leu Ser Asn His Leu Ser Gln Val  
                             1010                            1015                            1020

Ala Gln Asn Thr Gln Ile Ser Ser Gly Met Ser Ser Lys Ile Glu  
                             1025                            1030                            1035

Asp Asn Ala Asn Asn Ile Gln Arg Asn Tyr Leu Ser Ser Ile Gly

1040		1045		1050
Lys Leu Ser Glu Tyr Arg Asn Ser Leu Glu Ser Lys Leu Asp Gln				
1055		1060		1065
Ala Tyr Thr Pro Asn Phe Leu His Cys Lys Asp Ser Gln Gln Gln				
1070		1075		1080
Ile Val Cys Ile Ala Glu Gln Ser Lys His Ser Glu Thr Cys Ser				
1085		1090		1095
Pro Gly Asn Thr Ala Ser Glu Glu Ser Gln Met Pro Asn Asn Cys				
1100		1105		1110
Phe Val Thr Ser Leu Arg Ser Pro Ile Lys Gln Ile Ala Trp Glu				
1115		1120		1125
Gln Lys Gln Arg Gly Phe Ile Leu Asp Met Ser Asn Phe Lys Pro				
1130		1135		1140
Glu Arg Val Lys Pro Arg Ser Leu Ser Glu Ala Ile Ser Gln Thr				
1145		1150		1155
Lys Ala Leu Ser Gln Cys Lys Asn Arg Asn Val Ser Thr Pro Ser				
1160		1165		1170
Ala Phe Gly Glu Gly Gln Ser Gly Leu Ala Val Leu Lys Glu Leu				
1175		1180		1185
Leu Gln Lys Arg Gln Gln Lys Ala Gln Asn Ala Asn Thr Thr Gln				
1190		1195		1200
Asp Pro Leu Ser Asn Lys His Gln Pro Asn Lys Asn Ile Ser Gly				
1205		1210		1215
Ser Leu Glu His Asn Lys Ala Asn Lys Arg Thr Arg Ser Val Thr				
1220		1225		1230
Ser Pro Arg Lys Pro Arg Thr Pro Arg Ser Thr Lys Gln Lys Glu				
1235		1240		1245
Lys Ile Pro Lys Leu Leu Lys Val Asp Ser Leu Asn Leu Gln Asn				
1250		1255		1260
Ser Ser Gln Leu Asp Asn Ser Val Ser Asp Asp Ser Pro Ile Phe				
1265		1270		1275

Phe Ser	Asp Pro Gly Phe Glu	Ser Cys Tyr Ser Leu	Glu Asp Ser
1280	1285	1290	
Leu Ser	Pro Glu His Asn Tyr	Asn Phe Asp Ile Asn	Thr Ile Gly
1295	1300	1305	
Gln Thr	Gly Phe Cys Ser Phe	Tyr Ser Gly Ser Gln	Phe Val Pro
1310	1315	1320	
Ala Asp	Gln Asn Leu Pro Gln	Lys Phe Leu Ser Asp	Ala Val Gln
1325	1330	1335	
Asp Leu	Phe Pro Gly Gln Ala	Ile Glu Lys Asn Glu	Phe Leu Ser
1340	1345	1350	
His Asp	Asn Gln Lys Cys Asp	Glu Asp Lys His His	Thr Thr Asp
1355	1360	1365	
Ser Ala	Ser Trp Ile Arg Ser	Gly Thr Leu Ser Pro	Glu Ile Phe
1370	1375	1380	
Glu Lys	Ser Thr Ile Asp Ser	Asn Glu Asn Arg Arg	His Asn Gln
1385	1390	1395	
Trp Lys	Asn Ser Phe His Pro	Leu Thr Thr Arg Ser	Asn Ser Ile
1400	1405	1410	
Met Asp	Ser Phe Cys Val Gln	Gln Ala Glu Asp Cys	Leu Ser Glu
1415	1420	1425	
Lys Ser	Arg Leu Asn Arg Ser	Ser Val Ser Lys Glu	Val Phe Leu
1430	1435	1440	
Ser Leu	Pro Gln Pro Asn Asn	Ser Asp Trp Ile Gln	Gly His Thr
1445	1450	1455	
Arg Lys	Glu Met Gly Gln Ser	Leu Asp Ser Ala Asn	Thr Ser Phe
1460	1465	1470	
Thr Ala	Ile Leu Ser Ser Pro	Asp Gly Glu Leu Val	Asp Val Ala
1475	1480	1485	
Cys Glu	Asp Leu Glu Leu Tyr	Val Ser Arg Asn Asn	Asp Met Leu
1490	1495	1500	

Thr	Pro	Thr	Pro	Asp	Ser	Ser	Pro	Arg	Ser	Thr	Ser	Ser	Pro	Ser
1505						1510					1515			
Gln	Ser	Lys	Asn	Gly	Ser	Phe	Thr	Pro	Arg	Thr	Ala	Asn	Ile	Leu
1520						1525					1530			
Lys	Pro	Leu	Met	Ser	Pro	Pro	Ser	Arg	Glu	Glu	Ile	Met	Ala	Thr
1535						1540					1545			
Leu	Leu	Asp	His	Asp	Leu	Ser	Glu	Thr	Ile	Tyr	Gln	Glu	Pro	Phe
1550						1555					1560			
Cys	Ser	Asn	Pro	Ser	Asp	Val	Pro	Glu	Lys	Pro	Arg	Glu	Ile	Gly
1565						1570					1575			
Gly	Arg	Leu	Leu	Met	Val	Glu	Thr	Arg	Leu	Ala	Asn	Asp	Leu	Ala
1580						1585					1590			
Glu	Phe	Glu	Gly	Asp	Phe	Ser	Leu	Glu	Gly	Leu	Arg	Leu	Trp	Lys
1595						1600					1605			
Thr	Ala	Phe	Ser	Ala	Met	Thr	Gln	Asn	Pro	Arg	Pro	Gly	Ser	Pro
1610						1615					1620			
Leu	Arg	Ser	Gly	Gln	Gly	Val	Val	Asn	Lys	Gly	Ser	Ser	Asn	Ser
1625						1630					1635			
Pro	Lys	Met	Val	Glu	Asp	Lys	Lys	Ile	Val	Ile	Met	Pro	Cys	Lys
1640						1645					1650			
Cys	Ala	Pro	Ser	Arg	Gln	Leu	Val	Gln	Val	Trp	Leu	Gln	Ala	Lys
1655						1660					1665			
Glu	Glu	Tyr	Glu	Arg	Ser	Lys	Lys	Leu	Pro	Lys	Thr	Lys	Pro	Thr
1670						1675					1680			
Gly	Val	Val	Lys	Ser	Ala	Glu	Asn	Phe	Ser	Ser	Ser	Val	Asn	Pro
1685						1690					1695			
Asp	Asp	Lys	Pro	Val	Val	Pro	Pro	Lys	Met	Asp	Val	Ser	Pro	Cys
1700						1705					1710			
Ile	Leu	Pro	Thr	Thr	Ala	His	Thr	Lys	Glu	Asp	Val	Asp	Asn	Ser
1715						1720					1725			



Gln	Ile	Ala	Leu	Gln	Ala	Pro	Thr	Thr	Gly	Cys	Ser	Gln	Thr	Ala
1730						1735					1740			
Ser	Glu	Ser	Gln	Met	Leu	Pro	Pro	Val	Ala	Ser	Ala	Ser	Asp	Pro
1745						1750					1755			
Glu	Lys	Asp	Glu	Asp	Asp	Asp	Asp	Asn	Tyr	Tyr	Ile	Ser	Tyr	Ser
1760						1765					1770			
Ser	Pro	Asp	Ser	Pro	Val	Ile	Pro	Pro	Trp	Gln	Gln	Pro	Ile	Ser
1775						1780					1785			
Pro	Asp	Ser	Lys	Ala	Leu	Asn	Gly	Asp	Asp	Arg	Pro	Ser	Ser	Pro
1790						1795					1800			
Val	Glu	Glu	Leu	Pro	Ser	Leu	Ala	Phe	Glu	Asn	Phe	Leu	Lys	Pro
1805						1810					1815			
Ile	Lys	Asp	Gly	Ile	Gln	Lys	Ser	Pro	Cys	Ser	Glu	Pro	Gln	Glu
1820						1825					1830			
Pro	Leu	Val	Ile	Ser	Pro	Ile	Asn	Thr	Arg	Ala	Arg	Thr	Gly	Lys
1835						1840					1845			
Cys	Glu	Ser	Leu	Cys	Phe	His	Ser	Thr	Pro	Ile	Ile	Gln	Arg	Lys
1850						1855					1860			
Leu	Leu	Glu	Arg	Leu	Pro	Glu	Ala	Pro	Gly	Leu	Ser	Pro	Leu	Ser
1865						1870					1875			
Thr	Glu	Pro	Lys	Thr	Gln	Lys	Leu	Ser	Asn	Lys	Lys	Gly	Ser	Asn
1880						1885					1890			
Thr	Asp	Thr	Leu	Arg	Arg	Val	Leu	Leu	Thr	Gln	Ala	Lys	Asn	Gln
1895						1900					1905			
Phe	Ala	Ala	Val	Asn	Thr	Pro	Gln	Lys	Glu	Thr	Ser	Gln	Ile	Asp
1910						1915					1920			
Gly	Pro	Ser	Leu	Asn	Asn	Thr	Tyr	Gly	Phe	Lys	Val	Ser	Ile	Gln
1925						1930					1935			
Asn	Leu	Gln	Glu	Ala	Lys	Ala	Leu	His	Glu	Ile	Gln	Asn	Leu	Thr
1940						1945					1950			
Leu	Ile	Ser	Val	Glu	Leu	His	Ala	Arg	Thr	Arg	Arg	Asp	Leu	Glu

1955				1960				1965						
Pro	Asp	Pro	Glu	Phe	Asp	Pro	Ile	Cys	Ala	Leu	Phe	Tyr	Cys	Ile
1970				1975				1980						
Ser	Ser	Asp	Thr	Pro	Leu	Pro	Asp	Thr	Glu	Lys	Thr	Glu	Leu	Thr
1985				1990				1995						
Gly	Val	Ile	Val	Ile	Asp	Lys	Asp	Lys	Thr	Val	Phe	Ser	Gln	Asp
2000				2005				2010						
Ile	Arg	Tyr	Gln	Thr	Pro	Leu	Leu	Ile	Arg	Ser	Gly	Ile	Thr	Gly
2015				2020				2025						
Leu	Glu	Val	Thr	Tyr	Ala	Ala	Asp	Glu	Lys	Ala	Leu	Phe	His	Glu
2030				2035				2040						
Ile	Ala	Asn	Ile	Ile	Lys	Arg	Tyr	Asp	Pro	Asp	Ile	Leu	Leu	Gly
2045				2050				2055						
Tyr	Glu	Ile	Gln	Met	His	Ser	Trp	Gly	Tyr	Leu	Leu	Gln	Arg	Ala
2060				2065				2070						
Ala	Ala	Leu	Ser	Ile	Asp	Leu	Cys	Arg	Met	Ile	Ser	Arg	Val	Pro
2075				2080				2085						
Asp	Asp	Lys	Ile	Glu	Asn	Arg	Phe	Ala	Ala	Glu	Arg	Asp	Glu	Tyr
2090				2095				2100						
Gly	Ser	Tyr	Thr	Met	Ser	Glu	Ile	Asn	Ile	Val	Gly	Arg	Ile	Thr
2105				2110				2115						
Leu	Asn	Leu	Trp	Arg	Ile	Met	Arg	Asn	Glu	Val	Ala	Leu	Thr	Asn
2120				2125				2130						
Tyr	Thr	Phe	Glu	Asn	Val	Ser	Phe	His	Val	Leu	His	Gln	Arg	Phe
2135				2140				2145						
Pro	Leu	Phe	Thr	Phe	Arg	Val	Leu	Ser	Asp	Trp	Phe	Asp	Asn	Lys
2150				2155				2160						
Thr	Asp	Leu	Tyr	Arg	Tyr	Cys	Ser	Ile	Thr	Leu	Lys	Lys	Arg	Gln
2165				2170				2175						
Gln	Thr	Ser	Ala	Leu	Tyr	His	Trp	Gln	Val	Leu	Gly	Pro	Ile	Tyr
2180				2185				2190						

Phe Trp	Val Ile	Phe Thr	Ser	Tyr Asn	Ile Lys	Ile	Leu Phe	Met
2195			2200			2205		
Asp Leu	Leu Arg	Val Leu	Leu	Phe Val	Phe Leu	Arg	Arg Trp	Lys
2210			2215			2220		
Met Val	Asp His	Tyr Val	Ser	Arg Val	Arg Gly	Asn	Leu Gln	Met
2225			2230			2235		
Leu Glu	Gln Leu	Asp Leu	Ile	Gly Lys	Thr Ser	Glu	Met Ala	Arg
2240			2245			2250		
Leu Phe	Gly Ile	Gln Phe	Leu	His Val	Leu Thr	Arg	Gly Ser	Gln
2255			2260			2265		
Tyr Arg	Val Glu	Ser Met	Met	Leu Arg	Ile Ala	Lys	Pro Met	Asn
2270			2275			2280		
Tyr Ile	Pro Val	Thr Pro	Ser	Val Gln	Gln Arg	Ser	Gln Met	Arg
2285			2290			2295		
Ala Pro	Gln Cys	Val Pro	Leu	Ile Met	Glu Pro	Glu	Ser Arg	Phe
2300			2305			2310		
Tyr Ser	Asn Ser	Val Leu	Val	Leu Asp	Phe Gln	Ser	Leu Tyr	Pro
2315			2320			2325		
Ser Ile	Val Ile	Ala Tyr	Asn	Tyr Cys	Phe Ser	Thr	Cys Leu	Gly
2330			2335			2340		
His Val	Glu Asn	Leu Gly	Lys	Tyr Asp	Glu Phe	Lys	Phe Gly	Cys
2345			2350			2355		
Thr Ser	Leu Arg	Val Pro	Pro	Asp Leu	Leu Tyr	Gln	Val Arg	His
2360			2365			2370		
Asp Ile	Thr Val	Ser Pro	Asn	Gly Val	Ala Phe	Val	Lys Pro	Ser
2375			2380			2385		
Val Arg	Lys Gly	Val Leu	Pro	Arg Met	Leu Glu	Glu	Ile Leu	Lys
2390			2395			2400		
Thr Arg	Phe Met	Val Lys	Gln	Ser Met	Lys Ala	Tyr	Lys Gln	Asp
2405			2410			2415		

Arg	Ala	Leu	Ser	Arg	Met	Leu	Asp	Ala	Arg	Gln	Leu	Gly	Leu	Lys
2420						2425					2430			
Leu	Ile	Ala	Asn	Val	Thr	Phe	Gly	Tyr	Thr	Ser	Ala	Asn	Phe	Ser
2435						2440					2445			
Gly	Arg	Met	Pro	Cys	Ile	Glu	Val	Gly	Asp	Ser	Ile	Val	His	Lys
2450						2455					2460			
Ala	Arg	Glu	Thr	Leu	Glu	Arg	Ala	Ile	Lys	Leu	Val	Asn	Asp	Thr
2465						2470					2475			
Lys	Lys	Trp	Gly	Ala	Arg	Val	Val	Tyr	Gly	Asp	Thr	Asp	Ser	Met
2480						2485					2490			
Phe	Val	Leu	Leu	Lys	Gly	Ala	Thr	Lys	Glu	Gln	Ser	Phe	Lys	Ile
2495						2500					2505			
Gly	Gln	Glu	Ile	Ala	Glu	Ala	Val	Thr	Ala	Thr	Asn	Pro	Lys	Pro
2510						2515					2520			
Val	Lys	Leu	Lys	Phe	Glu	Lys	Val	Tyr	Leu	Pro	Cys	Val	Leu	Gln
2525						2530					2535			
Thr	Lys	Lys	Arg	Tyr	Val	Gly	Tyr	Met	Tyr	Glu	Thr	Leu	Asp	Gln
2540						2545					2550			
Lys	Asp	Pro	Val	Phe	Asp	Ala	Lys	Gly	Ile	Glu	Thr	Val	Arg	Arg
2555						2560					2565			
Asp	Ser	Cys	Pro	Ala	Val	Ser	Lys	Ile	Leu	Glu	Arg	Ser	Leu	Lys
2570						2575					2580			
Leu	Leu	Phe	Glu	Thr	Arg	Asp	Ile	Ser	Leu	Ile	Lys	Gln	Tyr	Val
2585						2590					2595			
Gln	Arg	Gln	Cys	Met	Lys	Leu	Leu	Glu	Gly	Lys	Ala	Ser	Ile	Gln
2600						2605					2610			
Asp	Phe	Ile	Phe	Ala	Lys	Glu	Tyr	Arg	Gly	Ser	Phe	Ser	Tyr	Lys
2615						2620					2625			
Pro	Gly	Ala	Cys	Val	Pro	Ala	Leu	Glu	Leu	Thr	Ser	Phe	Phe	Ile
2630						2635					2640			

Val	Leu	Leu	Leu	Phe	Asn	Ser	Asp	Leu	Ile	Cys	Glu	Lys	Asp	Gly
2645						2650					2655			
Phe	His	Asn	Ser	Ile	Trp	Val	Trp	Phe	Phe	Ser	Leu	Asn	Ser	Asn
2660						2665					2670			
Arg	Lys	Met	Leu	Thr	Tyr	Asp	Arg	Arg	Ser	Glu	Pro	Gln	Val	Gly
2675						2680					2685			
Glu	Arg	Val	Pro	Tyr	Val	Ile	Ile	Tyr	Gly	Thr	Pro	Gly	Val	Pro
2690						2695					2700			
Leu	Ile	Gln	Leu	Val	Arg	Arg	Pro	Val	Glu	Val	Leu	Gln	Asp	Pro
2705						2710					2715			
Thr	Leu	Arg	Leu	Asn	Ala	Thr	Tyr	Tyr	Ile	Thr	Lys	Gln	Ile	Leu
2720						2725					2730			
Pro	Pro	Leu	Ala	Arg	Ile	Phe	Ser	Leu	Ile	Gly	Ile	Asp	Val	Phe
2735						2740					2745			
Ser	Trp	Tyr	His	Glu	Leu	Pro	Arg	Ile	His	Lys	Ala	Thr	Ser	Ser
2750						2755					2760			
Ser	Arg	Ser	Glu	Pro	Glu	Gly	Arg	Lys	Gly	Thr	Ile	Ser	Gln	Tyr
2765						2770					2775			
Phe	Thr	Thr	Leu	His	Cys	Pro	Val	Cys	Asp	Asp	Leu	Thr	Gln	His
2780						2785					2790			
Gly	Ile	Cys	Ser	Lys	Cys	Arg	Ser	Gln	Pro	Gln	His	Val	Ala	Val
2795						2800					2805			
Ile	Leu	Asn	Gln	Glu	Ile	Arg	Glu	Leu	Glu	Arg	Gln	Gln	Glu	Gln
2810						2815					2820			
Leu	Val	Lys	Ile	Cys	Lys	Asn	Cys	Thr	Gly	Cys	Phe	Asp	Arg	His
2825						2830					2835			
Ile	Pro	Cys	Val	Ser	Leu	Asn	Cys	Pro	Val	Leu	Phe	Lys	Leu	Ser
2840						2845					2850			
Arg	Val	Asn	Arg	Glu	Leu	Ser	Lys	Ala	Pro	Tyr	Leu	Arg	Gln	Leu
2855						2860					2865			
Leu	Asp	Gln	Phe											

2870